The Mining Journal
AND ATMOSPHERIC RAILWAY GAZETTE,

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 595.—Vol. XVII. LONDON, SATURDAY, JANUARY 16, 1847. [Price 6d.

MINE AND MINING MATERIALS FOR SALE.—TO BE SOLD, BY PRIVATE CONTRACT, all that MINE, or ADVENTURE, known by the name of WHEAL KENDALL MINE, situate in the parish of LANLIVERY, together with all the MATERIALS now on the mine, nearly new—consisting of

One 40-feet WATER-WHEEL, 3 ft. 3 in. in breast, with cast-iron axle, cranks, bob, &c.—suitable to 5, 6, or 7 feet stroke
230 Fathoms of 1¼ in. ROUND IRON RODS, with pulleys, stands, &c.
47 Fathoms of 6-inch wood shaft rods
15 Fathoms of 10 and 11-inch pumps
9 Fathoms of 8-inch ditto
Plunger-pole and case
Stuffing-box and glands
H-piece and windbore
25 Fathoms bucket-rods and joints
3 9-inch working barrels
2 Clack seating-pieces, with windbores
6 Prangs, with bucket brasses
50 Fathoms of ladders
1 36-inch smith's bellows
1 33-inch ditto ditto
2 Smiths' anvils
1 Ditto vice
1 Screwing stock, with plates, taps, &c., from 1 in. to 1¼ in.
Sundry smiths' tools
1 Ton of new iron
Several cwts. of miners' tools
Capstan and shears
Capstan rope, pulleys, &c.
Horse-whim, with shaft, tackle, kibbles, &c.
50 Fathoms of rope, and sundry other useful mining materials.

For view, apply to Capt. W. Nettel, of Tywardreath; and for further particulars, to Mr. James Thomas, Iron-Works, Charlestown; Mr. John Hodge, Foundry, St. Austell; or to Mr. Wm. Hodge, the purser at Fowey Consols Mine.

VALUABLE SLATE QUARRY AND COPPER MINES IN NORTH WALES.—To be DISPOSED of, by PRIVATE CONTRACT, that valuable BLUE SLATE QUARRY, called and known by the name of HAFOTTY, situate in the parish of Llanfrothan, in the county of Merioneth shire, within five miles of Port Madoc, and two of the Festiniog Railway, which leads to that flourishing port. This quarry consists of an abundance of slates of the best description, which can be sawn to any purpose, and is free from rubbish. The proprietors have a take-note or grant for three years, and to have a lease for 30 years at any time during the existence of the take-note—the liberty being 20 acres. Also, on the same land, and under the same lease, a very desirable COPPER MINE SETT, with good prospects of raising large quantities of valuable ores. A turnpike road is immediately to be made from Festiniog to Llanfrwst, which will facilitate the transit of the slates from the quarry to the navigable river of Conway, and also join the Chester and Holyhead Railway at Conway. For further particulars, apply to Mr. W. Roberts, Quarryman's Arms, Clewiy-y-Bont, Llanddeiniolan, near Carnarvon, North Wales.—December 24, 1846.

TO BE LET, the PARK-HILL MINES, DEAN FOREST, GLOUCESTERSHIRE—containing ONE MILLION TONS OF COAL, and ONE MILLION TONS of rich IRON ORE, which, being calcareous, smelts well with argillaceous ironstone, and may be delivered in large quantities to the Staffordshire, Shropshire, and Welsh iron-works, at a price far below the cost of local ironstones. The mines are drainable by level, and can be opened at a trifling expense; and, were blast-furnaces erected, their produce might be smelted on the spot into excellent iron.—Apply (post paid) to Henry H. Fryer, Esq., solicitor, Coleford, Gloucestershire.

WELSH SMOKELESS COAL.—TO BE LET, a valuable TRACT of MINERAL PROPERTY, situate at ABERDARE, Glamorganshire, and known as the BLAENAMAN VAWR ESTATE. It contains the whole of the strata, both of coal and ironstone, common to that district, including the SEAM of SMOKELESS COAL, so well known as POWELL'S DUFFRYN, and which is now held in high repute for STEAM-PACKET and other purposes. The property is 460 acres in extent—is situated within a short distance of the recently constructed Aberdare Railway, and the coal can be won at a moderate depth.

Further particulars may be obtained on application to Messrs. Llewellin and Nephew, mining and civil engineers, Pontypool, Monmouthshire.

STEAM COAL—WITHOUT SMOKE, as per experiments made at her Majesty's Dockyard, Woolwich.
CAMERON'S COALBROOK STEAM COAL, AND SWANSEA AND LOUGHOR RAILWAY COMPANY.—(Completely Registered and Incorporated.)
OFFICES—2, MOORGATE-STREET, LONDON.

The directors are now prepared to supply steam ship companies, manufacturers, shippers, and others, with the company's steam coal, either at the company's wharf at Swansea, or in London. A statement, showing by comparative trial the superiority of this coal for steam purposes over every other, and a scale of prices, may be had on application at the company's offices here, or at their wharf at Swansea.—March 18, 1846.

GLENKENS LEAD AND COPPER MINES.
KIRKCUDBRIGHTSHIRE.—In consequence of MINERALS, of considerable value, having been found on the ESTATES in which the GLENKENS MINES are situate an Act of Parliament has been obtained, to enable the trustees to GRANT MINERAL LEASES. These mines are situated in the centre of a mineral country, and in the vicinity of the flourishing lead works of Carsphairn, Lead Hills, the Newton Stewart, and Heston Island Copper Mines, the Kirkcudbrightshire Mining Company's works, and others in that part of Scotland.

The proprietor has been, for the last two years, exploring and opening the ground; and five promising lodes have been proved, which are now being opened and extended by Cornish miners. There being every prospect of a most satisfactory result at an early period, as appears from the reports of the several mine agents who have inspected the lands, as also of the captain now superintending the works, a company is being formed, to give the mines a fair trial, on the principle of the Cost-book System, by dividing the interests into 1000 shares, of which some few still remain unappropriated.

Plans of the sett, comprising about 1200 acres, and the several reports, may be seen, and every information obtained, at the offices of Messrs. Bullock and Luscombe, No. 35, Lincoln's Inn-fields, to whom applications for shares must be made.

No applications can be received after MONDAY, the 18th January. The letters of allotment are being issued with all possible dispatch, and notice will be given, in a few days, of the First General Meeting, after which the company will proceed with the works.

GREAT SOUTH TOLGUS COPPER AND TIN MINING COMPANY.—*(ON THE COST-BOOK SYSTEM.)*
Capital £4300, in 1500 shares, of £3 each.—Deposit £2 per share—the remainder, as required, in calls not exceeding 10s. each per share.

This valuable mining property, held under a lease for 21 years, at the reduced dues of 1-15th, is situated in the parish of Redruth, in the county of Cornwall, and immediately adjoins, on the south, the well-known Great Wheal Tolgus Mine, which realised, during its late workings, a profit of £280,000—the greater part of which was derived from the various levels, from the adit to 110 fms. below, and from a length of ground within 100 fms. east and west of the great cross-course.

In this sett there are eight known lodes, three of which have proved very productive, as far as they have been wrought upon—£9000 worth of rich copper ore having been raised therefrom in a short time. The other five lodes are in virgin ground, below the adit level. None of the lodes in this sett have been yet so far wrought upon as to intersect the great cross-course—to do which, is one of the leading features that renders the prosecution of this mine so highly desirable.

The report of the mining agents in the prospectus—emanating from men of acknowledged celebrity and most extensive practical knowledge and information—is highly flattering, and fully justifies the conclusion, that, under judicious management, a liberal profit will be the result of a vigorous prosecution of this work, and as well renders the detail of further particulars unnecessary.

The individual liability of shareholders in this company is limited to the amount and number of shares respectively held; and any proprietor may, at any time, determine his or her liability by a relinquishment of their respective shares.

Each applicant for shares, of good reference, will immediately receive a letter of allotment for the whole amount of shares required; but, if the deposit upon such shares be not promptly paid by the day prescribed in the letter of allotment, such shares will be granted to the next unsupplied applicant.

Applications for shares to be made to the secretaries of the company, at their offices, 29, Castle-street, Liverpool; or at the office of the *Mining Journal*, 26, Fleet-street, London; or to Messrs. Callon and Feverchaux, brokers, 4, Finch-lane, Cornhill, London, where prospectuses may be obtained.

IBERIAN SILVER-LEAD ORE COMPANY—Established for SMELTING, on an extensive scale, the rich SILVER-LEAD ORES of ALMAGRERA, in SPAIN, where the company have two large establishments, about to be worked, with powerful machinery, and on a new refining process.

The large profits to be realised by the company, enable the directors to guarantee a minimum dividend of 20 per cent., payable in half-yearly dividends of 10 per cent. each, upon 12,000 reserved shares, which are now offered to the public at 12s. 6d. per share, free from further calls; the guarantee will last as long as any portion of the 12s. 6d. per share remains to be repaid to the shareholders, who will thus soon find themselves proprietors of the said shares, with a reimbursed capital.

Applications for prospectuses and shares at the company's temporary offices, 6, Bank Chambers; and at Messrs. L. M. Simon and Son, stock and sharebrokers, 7, Warnford-court, Throgmorton-street.

Bankers of the Company—Messrs. Sapte, Banbury, Muspratt, and Co., 77, Lombard-street.

UNITED STATES MINES.

COPPER ORE, from the best localities, as Grey, Black Oxide, and Sulphuret.
COBALT OXIDE, yielding from 5 to 90 per cent.
CHROME, yielding from 30 to 47 per cent.
MANGANESE, yielding from 75 to 90 per cent.
LEAD ORE, of the best quality.
ZINC, in form of Blende and Calamine.
Likewise, SOAP STONE, WHITE VITREOUS FELSPAR, BLACK LEAD, PURE WHITE LEAD, MICA, in small and large sheets.

THE ABOVE NATURAL PRODUCTIONS may be obtained in any quantity, and on the most reasonable terms, by applying to
DR. LEWIS FEUCHTWANGER, New York City.

PROSPECTUS OF A JOINT-STOCK COMPANY FOR THE MANUFACTURE OF MALLEABLE IRON, TO BE CALLED THE

AYRSHIRE MALLEABLE IRON COMPANY.

Capital £200,000, divided into 10,000 shares, of £20 each.
£10 per share, to be called up in the first instance, by four instalments, at intervals of at least three months.
Twenty shillings per share to be deposited when the shares are allocated.

INTERIM COMMITTEE.

CHAIRMAN—Capt. W. F. BLAIR, of Blair, director in the Glasgow and Ayr Railway
HUGH MILLER, Esq., of Midton, Provost of Ayr, director of the Glasgow and Ayr Railway
JOHN BROWN, Esq., Provost of Kilmarnock
JAMES MILLER, Esq., merchant, Ayr
WILLIAM CROIL, Esq., merchant, Glasgow
ALEXANDER GUTHRIE, Esq., of Mount, Ayrshire
THOMAS BIGGART, Esq., Dalry
JOHN HAMILTON, Esq., of Dunaflan
PATRICK MATTHEW, Esq., of Gourdie Hill
JAMES FRASER MILLER, Esq., engineer, Ayr
ALEXANDER ALISON, Esq., of the Blair Iron-Works
GEORGE YOUNG, Esq., one of the magistrates of Kilmarnock
THOMAS DRUMMOND, Esq., of Craigie.
(With power to add to their number.)

SOLICITORS AND INTERIM SECRETARIES—Messrs. J. and A. Tennent, 40, George's-square.
ENGINEER—Mr. John Watt, 39, St. Enoch-square.
BANKERS—Western Bank of Scotland; British Linen Company.

The immense quantity of pig-iron now sent to England, to be manufactured into malleable iron, and brought back here for consumption, the increasing demand for all kinds of iron, and the cheapness of coal and pig-iron in Scotland, evidently point out that country as by far the best for works of this description; and in no part of it are there so many advantages as in the district in which the proposed works is to be erected. Rich in minerals, the cost of producing pig-iron is such, as places Ayrshire in a most favourable position, compared with the other districts of Scotland; and it is a matter of surprise that, while Lanarkshire has several malleable iron-works, this locality is still unsupplied, though in the midst of abundant fields of superior coal—surrounded by iron-works—intersected by railways, and bounded by good shipping ports. Also, this part of the country being now looked to for supplying the deficiency caused by the working out of the other mineral districts.

The site for the proposed works has been fixed near to Dalry—thus securing, by railway carriage, easy access to the various shipping ports, and internal communication throughout the whole kingdom; while supplies of the best description of pig-iron can be had from the Glengarnock, Blair, Eglinton, Muirkirk, Lugar, and Portland Iron-Works, all in the county of Ayr, and several of them close to the proposed site. The supply of coal is abundant and cheap in this part of Ayrshire.

To those who know anything of the iron trade, it is almost superfluous to say, that few undertakings in this country have been, and are now, more successful than Malleable Iron-Works; while to those ignorant of the trade, it is only fair to add, that the engineer employed by the company shows in his report an annual profit of at least 20 per cent. on the paid-up capital.

The report, &c., can be seen at the office of the interim secretary; and so soon as two-thirds of the number of shares are applied for, the company will be considered as formed, and a meeting of the shareholders called for appointing directors, to whom will be entrusted the management of the affairs of the company.

A large portion of the shares are already taken up by parties connected with the iron trade, which is the best guarantee as to the merit of the company and the success of the undertaking.

Every information will be afforded intending subscribers at the office of the interim secretaries.

Applications for shares in the subjoined form may be addressed to Messrs. Foulds and Cockburn, sharebrokers, 58, St. Vincent-street; or Mr. A. W. Forbes, 83, Queen-street, Glasgow; Messrs. John Robertson and Co., 15, Royal Exchange, Edinburgh; Mr. John Fox, 31, Great Winchester-street; or Mr. H. J. Bolding, Tokenhouse-yard, London; Mr. J. Richardson, 4, India-buildings, Liverpool; Mr. Edward Ashworth, Manchester; Messrs. Stansfield and Wise, Leeds.

To the Interim Secretaries, Ayrshire Malleable Iron Company.

GENTLEMEN,—Please insert my name as a subscriber for ..... shares in the Ayrshire Malleable Iron Company; and I hereby bind myself to pay the deposit, and to subscribe the deed of copartnership prepared by the interim committee, when required.

I am, Gentlemen,
Your most obedient servant,
Full name and designation.....
Reference.....
Signature.....
Date.....

METROPOLITAN IRON AND STEEL COMPANY.
(Provisionally Registered, pursuant to 7 and 8 Vic., c. 110.)
Capital £200,000, in 20,000 shares of £10 each.—Deposit 1s. per share.

MANAGING DIRECTORS.

CHARLES CHILTON, Esq., Steam Mills, Old-street, London
THOMAS KEARSLEY, Esq., merchant, Southampton-buildings
GEORGE SCOTT, Esq., engineer, Bouverie-street
HANNIBAL GARDNER, Esq., Castle-street, Holborn.
(With power to add to their number.)

BANKERS.
London and Westminster Banking Company.

SOLICITORS.
Goddard and Eyre, No. 101, Wood-street, Cheapside.

ARCHITECT AND SURVEYOR.
William Sowter, Esq., No. 10, Union-place, Lambeth-road.

SECRETARY—James Evans.

A company has been formed for the MANUFACTURE OF IRON AND STEEL (from cast, scrap, and all descriptions of old refuse iron), which shall be of a superior quality to any hitherto produced in the mining districts.—The objects of the company are fully explained in the prospectus.

Applications for shares, in the subjoined form, to be made to Messrs. Prichett and Mundy, sharebrokers, No. 68, Broad-street; Messrs. W. Busfield and Co., sharebrokers, 17, Change-alley, Cornhill; the Western Railway Exchange, 127, Regent-street; Messrs. W. and H. Davies, sharebrokers, Liverpool; Mr. Joseph Fernyhough, sharebroker, Manchester; Messrs. Timmins and Lane, sharebrokers, Birmingham; Mr. James Renton, sharebroker, Edinburgh; Mr. R. C. Meikle, sharebroker, Glasgow; Mr. John Cooper, sharebroker, Leeds; Messrs. Goddard and Eyre, solicitors to the company, 101, Wood-street, Cheapside, or to the secretary, at the offices, 39, Moorgate-street.

HEMP AND FLAX MANUFACTURING COMPANY—
(Mr. DONLAN'S PROCESS).
Provisionally Registered, pursuant to the statute 7 and 8 Vic., c. 110.
To be Incorporated, limiting the liability to the amount of their subscription.
PRESENT MANUFACTURING ESTABLISHMENT OF THE COMPANY,
RUGBLEY, STAFFORDSHIRE.
Capital £60,000, in 12,000 shares, of £5 each—Deposit, pursuant to the statute, 6d. p. share.

TRUSTEES FOR THE INVENTOR.
The Right Hon. VISCOUNT INGESTRE, M.P.—Sir GEORGE SINCLAIR, Bart.

TRUSTEES FOR THE CAPITAL STOCK OF THE COMPANY.
The Right Hon. Viscount INGESTRE, M.P., Ingestre Hall, Staffordshire
Colonel Sir WM. R. CLAYTON, Bart., 79, Gloucester-place, Portman-square
JOHN MEE MATTHEW, Esq., F.S.A., Gray's Inn
ALFRED BRODIE, Esq., 4, Cavendish-square
C. H. ROGERS HARRISON, Esq., Southampton-street.

SECRETARY—Henry Prater, Esq., M.A., Middle Temple.
BANKERS—London Joint-Stock Bank, Princes-street, London, and Pall-mall, Westminster.
SOLICITOR—John Thomas Sanders, Esq., 31, Ely-place, Holborn.

The establishment of this company was formed at Rugeley, in Staffordshire, some years ago, for preparing the fibre of New Zealand, Italian, Russian, Dutch, and Colonial, as well as Irish and other home-grown hemp and flax, and all fibrous substances, for manufacturing purposes, according to peculiar processes, chymical as well as mechanical, applied to them by Mr. Donlan—and for working up those fibres, particularly New Zealand flax, into textile fabrics. Mr. Donlan and his friends, however, have found it impossible to obtain from New Zealand supplies of the raw material in any quantities; accordingly, they have determined to devote the processes to the manufacture of European hemp and flax.

As far as this manufacture has proceeded, it has met with all the success which its best friends could have desired—the fabrics being proved to be impervious to damp and mildew—proof against heating and premature decay—perfectly flexible in the hardest frost, and not subject to attacks by vermin, and has stood the test of 15 years' trial.

The factory is in profitable operation, and the accounts may be inspected at the offices of the company, where also samples of the different fabrics are on view.

The necessary deed will be forthwith prepared for the signature of the shareholders.

For particulars, prospectuses, and forms of applications for shares, apply at the offices of the company, 10, Coleman-street; to J. T. Sanders, Esq., 31, Ely-place, Holborn, the solicitor to the company; and to Josiah Bates and Co., brokers, Founders'-hall-court, Lothbury.

JOHN SIMPSON,
93 Moorgate-street, and 1, Coleman-street-buildings.

ON THE VENTILATION OF MINES.
This day is published, price 4s., 8vo., cloth, with four illustrative plans,
THE VENTILATION OF MINES.
BY BENJAMIN GIBBONS, Esq.
Birmingham: Wrightson and Webb.—London: Simpkin, Marshall, and Co.

NOTICE TO THE MANAGERS OF MINING COMPANIES,
SMELTING WORKS, &c.
Mr. MITCHELL (late Mitchell and Field) begs to announce, that ASSAYS and ANALYSES of all descriptions of ORES, MINERALS, and FURNACE PRODUCTS, are conducted at his LABORATORY, 22, HAWLEY-ROAD, KENTISH TOWN, to which direction all communications are to be addressed.
N.B.—Instruction in all branches of assaying and mineral analysis as usual.

WANTED, for a Colliery, 80 fathoms deep, a powerful HIGH-PRESSURE STEAM-ENGINE, in good condition—not less than 48-inch cylinder, with suitable boilers, pumps, &c., complete—to pump water and raise coal.—Apply to Mr. John Calvert, Newbridge, Cardiff, Glamorgan.

WANTED, by a person of practical experience, a SITUATION to SUPERINTEND COAL MINES. The advertiser would have no objection to go abroad. Respectable references will be given.—Address "W. L.," at the office of the *Mining Journal*, 26, Fleet-street, London.

WANTED, in a respectable Mining Engineer's office, a YOUNG MAN, who perfectly understands the BUSINESS of LAND and COLLIERY SURVEYING, MAPPING, and the regular ROUTINE of a SURVEYOR'S OFFICE—writes a good hand, and understands book-keeping. Specimens as to ability, and testimonials of character, will be required.—Refer to Mr. G. Coxon, architect and surveyor, Hanley.—P.S. A well-educated and respectable YOUTH WANTED, in the same office, with whom a moderate premium will be expected.

TO MANUFACTURING CHEMISTS, ROAD CONTRACTORS, AND OTHERS.—The BIRMINGHAM AND STAFFORDSHIRE GAS-LIGHT COMPANY are open to RECEIVE TENDERS for PURCHASE of the TAR generated at their works, in Birmingham and West Bromwich, for a term—to commence from the 20th day of February next.—Letters of tender to be addressed to the clerk, on or before the 18th inst. By order of the board, JOHN GREGORY,
Gas Office, Old-square, Jan. 6, 1847. Clerk to the Company.

MINING OFFICES, THREE KING'S-COURT, LOMBARD-STREET, LONDON.
Mr. R. TREDINNICK, of Cornwall, being in constant communication with practical agents in the several mining districts, PROFFERS his SERVICES to capitalists and adventurers in the PURCHASE and DISPOSAL of SHARES of every description; also, obtaining authentic reports and data relative thereto. Mr. T. has on sale shares in the best dividend-paying mines in Cornwall and Devon, at from three to five years' purchase, whilst those on the eve of paying are selling at corresponding low prices. Every information afforded, on personal application, gratuitously.

BUYER in Condurrow, East Crofty, North Roskear, Wheal Jane, Cubert, Alfred Consols, Wheal Maria, West Providence, and Wheal Agar; and SELLER in West Seton, Wheal Seton, and all the best dividend paying mines in Cornwall and Devon.

MINING PROPERTY.—CAPITALISTS who are disposed to INVEST in CORNISH and FOREIGN MINES, will find the present opportunity very favourable for so doing. From large sums having been lately diverted from such investments for railway speculations, standard mines are now selling at prices that will pay the purchaser 20 per cent. per annum for his outlay. There are also other mines that are on the eve of paying dividends, which can be recommended with confidence.
Applications to be made to Mr. JAMES HERRON, mining agent, No. 3, Adam's-court, Broad-street, London.

MESSRS. R. CLARK & CO. beg to acquaint their friends and the public in general, that they have taken OFFICES as below, where they intend to carry on BUSINESS as STOCK, SHARE, and MINING AGENTS; relying with confidence upon the method adopted by them for conducting all business entrusted to their agency, Messrs. R. C. & Co. solicit a continuance of that support it will be, by strictest attention to all orders, their endeavour to deserve.
N.B.—Money advanced upon scrip and other securities.
3, Austinfriars, Broad-street, Oct. 17, 1846.

MESSRS. LINTHORNE, JONES, AND CO., STOCK, MINING, AND SHARE AGENTS,
*** Every information will be afforded as to the markets and prices of the above, by application (post paid) at their offices,
48, *THREADNEEDLE-STREET, LONDON.*

MESSRS. J. PAINTER AND CO., SHAREBROKERS, MINING AND GENERAL AGENTS,
28, *CASTLE-STREET, LIVERPOOL,*
AFFORD EVERY INFORMATION as to the STATE of the MARKETS, PRICES, &c. upon application.

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS.

WILLIAM H. SMITH, MINING SHARE AGENT,
10, *WARNFORD-COURT, THROGMORTON-STREET,*
has SHARES FOR SALE in the following MINES—viz.:

WHEAL BLENCOWE,	WEST SHEPHERD,
WHEAL LOUISA,	EAST WHEAL FORTUNE,
WHEAL MARY PENTUAN,	VICTORIA TIN MINING COMPANY.

*** Every information will be afforded on application.
MINING OFFICES, 1, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.

WATSON AND CUELL, MINE AGENTS.—N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain.

WILLIAM TRENERY, DEALER IN RAILWAY AND MINING SHARES.—ESTABLISHED TEN YEARS.
OFFICES, No. 50, THREADNEEDLE-STREET, LONDON.

MR. T. P. THOMAS is a SELLER in Barristown, Andrew and Nangiles, Botallack, Caradon Consols, Charlestown, Comfort, Condurrow, Gwinear, Consols, Cleveland, Herodsfoot, Ting-Tang, and United Mines, South Francis, and South Basset: and is a BUYER of Alfred Consols, Perran Wheal Virgin, Wheal Caleystick, North Roskear, Trelawney, Trehane, Wheal Bucketts, South Tolgus, & North Pool.

JOHN HARVEY, SHAREBROKER AND ASSAYER,
LISKEARD, CORNWALL.

JAMES LANE, MINING SHAREBROKER,
75, *OLD BROAD-STREET, LONDON.*

CONSOLIDATED COPPER MINES OF COBRE ASSOCIATION.—Notice is hereby given, that a HALF-YEARLY GENERAL MEETING of the proprietors of this association will be HELD, in conformity with the deed of settlement, at the office of the company, No. 26, Austinfriars, on Monday, the 25th day of January inst., at One o'clock precisely; on that day two directors—viz., Russell Ellice and Walter Shairp, Esqs., and one auditor, Francis Mills, Esq., will go out of office by rotation, but are immediately re-eligible, and are candidates for re-election.

It is necessary that persons intending to offer themselves as candidates for the direction and auditorship, should leave notice of such their intention with the secretary, at the office of the company, 26, Austinfriars, at least 14 clear days before the day of election.
By order of the court of directors,
26, Austinfriars, Jan. 6, 1847. WM. LECKIE, Secretary.

UNITED HILLS MINING COMPANY.—Notice is hereby given, that the SCRIPHOLDERS of this company, intending to take the NEW SHARES, pursuant to the resolutions of the special general meeting of the company, held this day, must DEPOSIT, in the office of the company, No. 5, Adam's-court, Broad-street, their SCRIP SHARES, and PAY the sum of ONE POUND for each new share allotted to them, on or before the 21st day of January inst., otherwise they will forfeit their right to have such new shares. Every shareholder will be entitled to one new share for every scrip share so deposited and paid upon. By order of the board,
5, Adam's-court, Broad-street, Jan. 7, 1847. JAMES SMITH, Secretary.

RHYMNEY IRON COMPANY.—SPECIAL NOTICE.—A SECOND GENERAL MEETING of the proprietors (pursuant to the deed of settlement) will be HELD at the London Tavern, on Wednesday, the 27th inst., at half-past One o'clock precisely, to consider the propriety of repealing the 13th clause of the deed of settlement, or of making such alteration in the said clause as may be deemed expedient. T. E. SCUDAMORE, Secretary.
7, Laurence Pountney-hill, Jan. 14, 1847.

THE PATENT SAFETY FUSE,
FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."
Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public.
References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

Society.	Address.	Day.	Hour.
Asiatic	14, Grafton-street	Saturday	2 P.M.
Statistical	12, St. James's-square	Monday	8 P.M.
Chemical	Society of Arts, Adelphi	Monday	8 P.M.
Medical	Bolt-court, Fleet-street	Monday	8 P.M.
Pathological	21, Regent-st., Waterloo-pl.	Monday	8 P.M.
Linnæan	Soho-square	Tuesday	8 P.M.
Horticultural	21, Regent-street	Tuesday	2 P.M.
Civil Engineers	25, Great George-street	Tuesday	8 P.M.
Society of Arts	Adelphi	Wednesday	8 P.M.
Geological	Somerset-house	Wednesday	8½ P.M.
Royal	Somerset-house	Thursday	4 P.M.
Antiquaries	Somerset-house	Thursday	8 P.M.
Royal Institution	Albemarle-street	Friday	8 P.M.
Royal Botanic	Inner Circle, Regent's-park	Saturday	3½ P.M.
Westminster Medical	37 a, Sackville-street	Saturday	8 P.M.

INSTITUTION OF CIVIL ENGINEERS.

JAN. 12.—Sir JOHN RENNIE (President) in the chair.

A paper by Mr. Shears, Assoc. Inst. C.E., was read, descriptive of the iron dock gates, constructed by Messrs. Rennie for the Russian Government, and erected at Sevastopool, on the Black Sea:—Sevastopool is very peculiarly situated amidst rocky ground, rising so abruptly from the shore that there was not space for the buildings necessary for a dockyard. On account of the depth of water close in shore, and other natural advantages, the Emperor determined to make it the site of an extensive establishment; and as there is not any rise of tide in the Black Sea, and the construction of cofferdams would have been very expensive and difficult in such a rocky position, it was decided to build three locks, each having a rise of 10 ft., and at this level of 30 ft. above the sea to place a main dock with lateral docks, into which vessels of war could be introduced, and the gates being closed, the water could be discharged by subterranean conduits to the sea, and the vessel being left dry, could be examined and repaired even beneath the keel. A stream was conducted from a distance of 12 miles, to supply the locks, and to keep the docks full. This, however, has been found insufficient, and a pumping-engine has since been erected by Messrs. Maudslay and Field for assisting. The original intention was to have made the gates for the docks of timber; but on account of the ravages of a worm, which it appears does not, as in the case of the *teredo navalis*, or the *terrebrans*, confine itself to the salt water, it was resolved to make them with cast-iron frames, covered with wrought-iron plates. There are nine pairs of gates, whose openings vary from 64 ft. in width, and 34 ft. 4 in. in height, for ships of 120 guns, to 46 ft. 7 in. in width, and 21 ft. in height, for frigates. The manipulation of such masses of metal as composed these gates demanded peculiar machines; accordingly, Messrs. Rennie fitted up a building expressly with machines constructed by Mr. Whitworth, by which all the bearing surfaces could be planed, and the holes bored in the ribs, and all the other parts, whether their surfaces were curved or planed. The planing was effected by tools which travelled over the surfaces backward and forward, cutting each way; the piece of metal being either held in blocks if the surface was plane, or turned on centres if it was curved. The drilling was performed by machines, so fixed, that the pieces could be brought beneath or against the drills in the required direction, and guided so as to insure perfect uniformity and accordance between them. Travelling cranes were so arranged as to take the largest pieces from the wharf, and place them in the various machines by the agency of a very few men, notwithstanding their formidable dimensions; the heel parts in some cases being upwards of 34 ft. long. Each endless screw, for giving progressive motion to the cutting tools, was 45 ft. long. Some idea may be formed of the manual labour avoided by the machines, when it is stated that the surface planed or turned in the nine pairs of gates equals 717,464 square inches, and in some cases a thickness of three-quarters of an inch was cut off. The surface in the drilled bolt-holes equals 120,000 square inches."—The paper gave all the details of the construction of the gates and the machines for making them, and was illustrated by a series of detailed drawings.

An interesting discussion followed, chiefly on the peculiarity of the site selected for the docks, and the supposed ravages of the worm in fresh water, as it was of unusual occurrence. It seemed to be the opinion, that the temperature of climate influenced the ravages of these insects.

SOCIETY OF ARTS.

JAN. 14.—JOSEPH PAYNE, Esq., in the chair.

Eighteen new members were ballotted for, and elected.—J. L. Ricardo, Esq., M.P., and J. Bell, Esq., were proposed as members.

The first communication read, was "On a New Condensing Rotary Steam-Engine," by Messrs. Cordes and Locke. Models and drawings of the invention were exhibited.—This is an invention belonging to the numerous class of rotary steam-engines, but differs from them in two respects. First, that whereas they have extensive rubbing surfaces, which require great accuracy and careful packing, and are attended with much friction and loss of power, this has no packing, and scarcely any friction—being merely a wheel, or vanes, revolving within a case, and receives impact from the steam as it passes from the cylinder to the condenser. Second, that whereas the common engine, revolving at high velocities, has to encounter great resistance from the air, this wheel revolves in vacuum by means of a condenser, worked by a triple pump, separated from the machinery of the engine. The proof which the patentee offers of the excellency of the engine, consists in the results of certain experiments made, on a large scale, in pumping water, and in direct competition with engines of the common form, in which, he stated, it was made to appear that the same general useful effect was obtained from the new as from the old engine, but with a much simpler and cheaper apparatus. The paper concluded, with the account of a large experiment, in which the rotary engine was used as an auxiliary to a common engine, with a gain of one-third more power. Mr. Cordes gave an interesting account of the working of the engine, and the results of the various experiments that had been made, after which, a lengthened discussion took place, in which Mr. Newton, Mr. Rotch, and other scientific gentlemen and engineers bore testimony to the ingenuity of the invention. The cost of constructing an engine on Messrs. Cordes and Locke's principle, is stated to be from 15*l.* to 20*l.* per dynometric horse-power, exclusive of boilers, the weight of engine per horse-power not exceeding 4 cwts.

The second communication by Mrs. Whitby, "On the cultivation of the Mulberry and the Growth of the Silk-worm in England," was commenced, and is to be resumed on Wednesday evening next.

INCRUSTATION OF STEAM BOILERS.

Nothing, perhaps, has contributed so much to the occurrence of fatal accidents as explosions arising from the incrustation of boilers. Scarcely a week elapses without the columns of the *Times* presenting the details of some frightful catastrophe, caused by the sudden bursting of steam apparatus; and in most instances it has been found, on subsequent investigation, that the accident had arisen from incrustation in the boiler.

Incrustation may cause explosions in various ways: by forming a layer of non-conducting matter between the metal and the fluid to be heated, and thus allowing the temperature of the former to rise to a high point, even to redness. The metal oxidizes rapidly at this temperature, and the boiler is thereby weakened and rendered incapable of sustaining the necessary pressure. But a more fruitful cause of accidents is the sudden removal of portions of incrustation, when the metal expands on the attainment of the high temperature; the water is thereby brought into contact with the heated metal, and evaporation takes place so suddenly as to resemble the evolution of gases from the firing of gunpowder. Indeed, the results in both cases are identical.

Numerous attempts have been made, both by practical and scientific persons, to avoid this danger, but without any decided success; and prudent engineers, with a view of modifying an evil which they could not effectually prevent, have been under the necessity of frequently blowing off their boilers for the purpose of driving out of them the highly concentrated water which they contained. This method is but partially successful; deposit still forms, only to be got rid of by the hammer and chisel—a process which, to say nothing of the expense it occasioned, deteriorated the boiler subjected to it. From these and other circumstances, it became a matter of the first importance to engineers to devise some means which would obviate the evil without injuring, by its chymical or mechanical action, the metal of the boiler, or of the other parts of the engine exposed to its influence.

About two years back, a Dr. Ritterbandt turned his attention to this subject, and succeeded in discovering a process which fulfils these conditions, and which, having been tried by numerous engineers of eminence, and found to answer, was eventually brought under the notice of the Institution of Civil Engineers, and of the Society of Arts. Its merits were discussed at much length by the members of those learned societies, who seemed generally to approve of Dr. Ritterbandt's system; the Society of Arts, in fact, rewarded the ingenious inventor with its gold Isis medal for his discovery.

The principle upon which Dr. Ritterbandt's invention is based is the chymical action which the muriate of ammonia exerts upon the carbonate of lime, the incrusting material. Dr. Ritterbandt discovered that, by introducing muriate of ammonia into a boiler containing water, holding lime in solution, the carbonate of lime, instead of depositing when the carbonic acid by which it was held in solution was expelled at a high temperature, became converted into muriate of lime, a substance eminently soluble, while the carbonate of ammonia, likewise formed by the double decomposition, passed off with the steam, so that the boiler could not foul. The process is equally applicable to fresh and salt water. The inventor has proved, that when sea-water is boiled, the incrustation produced is not formed of salt, but of calcareous matter, the salt not depositing until the water has attained a density far beyond that at which the boilers of marine engines are worked. The object of the frequent blowing off which obtains in practice is to prevent the accumulation of the deposited calcareous matter. By preventing the formation of carbonate, by the addition of muriate of ammonia, the necessity of blowing off is to a great extent dispensed with; for while, with the best contrived apparatus, it is found impossible to continue working at a density above 20° marine hydrometer, with the plan of Dr. Ritterbandt a density of 60° may be safely employed. Three-fourths of the quantity of water usually blown out is thus economised, and, consequently, that proportion of the loss of fuel saved. The soundness of Dr. Ritterbandt's principle has stood the test of time and experience. Twelve months have elapsed since his discovery was brought under the notice of the public, and in that time its operation has been tried in every variety of way with eminent success, in large and small steam-boats, in stationary and locomotive engines, working with water from all localities, and in every instance has it been found perfectly effective, not merely in keeping the boilers wherein it has been applied clear of deposit, but in disintegrating that which had formed previously to its application.

And we should be wanting in justice to the ingenious inventor, were we not to avow that the invention has been tried for nearly 12 months upon the boilers of the engines printing the *Times*, working on an average 17 hours *per diem*, throughout the year. Not only have the boilers been kept perfectly free from deposit, but an incrustation which was formed previously to the application of the invention has been completely removed. We can further state, that neither the boilers nor any part of the machinery has been in any, even in the slightest degree, acted upon or injured by the action of the remedy in question.—*Times.*

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY ....Belgian Railways—Amalgamation—London Tavern, at Twelve for One.

MONDAY.....Taw Vale Railway and Dock Company—London Tavern, at One.
Cameron's Coalbrook Steam Coal and Loughor and Swansea Railway Company—offices, at Twelve for One.
Provident Clerks' Mutual Benefit Association—London Tavern, at Six.

TUESDAY.....St. Katharine Dock Company—offices, at Twelve.
Vale of Neath Railway—offices, at Twelve.
Madras, Nellore, and Arcot Railway—offices, at Two.

WEDNESDAY...Wheal Arvose Mining Company—St. Austell.
Northern Counties Union Railway—London Tavern, at One.
Templemore and Nenagh Railway—Gresham Rooms, at One.
Rock Life Assurance Company—London Tavern, at Twelve.
City of London Gas-Light Company—offices, at Two.

THURSDAY.....Mitre General Life Assurance Company—offices, at Twelve.

FRIDAY.....Rugby, Derby, and Manchester Railway—London Tavern, at One.
Australian Agricultural Company—offices, at One.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

SAMBRE AND MEUSE RAILWAY.

The third half-yearly general meeting of the shareholders in this company was held at the London Tavern, on Monday last, the 11th inst.

W. P. RICHARDS, Esq., in the chair.

After the usual preliminary business, the report of the directors was read, which stated that, during the past half-year, the works had advanced with vigour—3000 men being employed; and that it was the object of the directors to open the first section from near Charleroi to Walcourt, 12¼ miles, with two branches, together near 13 miles, at the earliest possible moment. It had been originally intended to work a portion of the branches by horse-power; but, on a more intimate acquaintance with the mineral traffic likely to ensue, they were convinced it could only be done by locomotive power. That it had become evident that the construction of the line, as originally intended, could not accommodate the traffic which would arise. M. De Grandvoir had prepared improved plans and estimates, which had received the approbation of the authorities: his estimates resulted in a sum of 920,000*l.*, to which it would be prudent to add 80,000*l.* for casualties, and for altering the line from single to double, from horse to locomotive power, &c.; the increase of 300,000*l.* was considered moderate. As a proof of the satisfactory improvement in the trade and traffic of the districts, the following comparative return would show—

Comparative Statement of the existing Traffic which would have come upon the Sambre and Meuse Railway in 1845 and 1846, if it had been open in those years; with the Returns therefrom, calculated at the company's tariff rates:—

	1845.		1846.	
Coal and coke	*Tons* 203,625	858,078*fr.*	*Tons* 203,725	858,078*fr.*
Iron ore	302,344	637,732	448,349	982,673
Pig and wrought-iron	23,627	68,402	31,155	67,660
Charcoal	23,254	39,422	21,904	44,931
Timber	81,000	257,430	128,300	324,105
Bark	3,000	13,346	3,000	13,346
Stone and marble	25,665	73,145	25,665	73,145
Slate	7,313	41,979	7,313	41,979
Tiles and pans	1,500	3,675	1,500	3,675
Grain and flour	2,624	11,846	6,243	21,972
Wine and liquids	2,676	7,626	3,008	8,572
Kelp ashes	2,400	7,560	2,400	7,560
Colonial produce	1,589	5,537	1,589	5,537
Luggage and parcels	3,697	5,288	5,545	7,932
Light goods, now carried by the coaches	3,697	40,237	—	43,648
Specie	—	3,412	—	3,412
Horses and cattle	—	87,919	—	87,919
Carriages & loaded waggons	—	7,311	—	7,311
*Passengers	*No.* 40,570	154,512	66,255	211,767
Total		2,324,467*fr.*		2,814,822*fr.*

Looking at all the circumstances of the case, they were convinced of the solid merits of the undertaking; and they entertained no doubt that true economy would be found in executing the work on a scale commensurate with the business to be done. The calls had been paid with great regularity, and the Government had returned three-fifths of the caution money originally deposited. From the statement of accounts, it appeared, that the total amount received for calls, interest, &c., was 237,460*l.* 14s. 3d.; and disbursements, 107,424*l.* 18s. 7d.; the balance, consisting of amount deposited with Government, advances to contractors, investments, and cash in hand, being 130,035*l.* 15s. 8d.

The CHAIRMAN, in moving the adoption of the report, and in a speech of considerable length, drew attention to the advantages of the railway, and mentioned some interesting statistical facts: before railways were introduced into Belgium the entire amount of heavy goods carried through to Germany did not exceed 1200 tons per annum; but, in 1845, the amount between the same points was 194,000 tons. The quantities of lighter goods were as two to five, and it could not be considered that they overrated the increase to be expected when they put it down at 60 per cent. It was estimated that they would carry 1000 tons daily of coals, coke, and iron ore, and 1000 tons of other heavy goods: 70,000 waggons, each containing 4 tons, traversed the Philippeville line every year. It was calculated that 100,000 tons of coal would traverse the Sambre and Meuse line for the north of France alone.—The report was unanimously adopted; and, thanks having been voted to M. De Grandvoir, the chairman, and directors, the meeting separated.

LONDON JOINT-STOCK BANK.—A general meeting of shareholders was held on Thursday, at the offices, Princes-street, Bank, which was very numerously attended. Mr. ORMSBY GORE, M.P., was called to the chair, and briefly addressed the shareholders. The report stated that the net profits of the last six months were 31,580*l.* 17s., and that the guarantee fund had been supported at the agreed sum of 120,000*l.*, according to the deed. In addition to the usual dividend, a bonus of 2s. per share was recommended by the directors to be divided among the shareholders. Beyond this there would still be a small surplus of 758*l.* 17s., to be carried to the guarantee fund. A balance of profit carried to account, 52,326*l.* 19s. 7d. The amount of the guarantee fund, previous to the present addition, is 120,117*l.* 14s. 3d. Messrs. Curling, Foster, Taylor, and Meek, were elected directors, and a ballot was demanded in favour of Mr. Valentine Knight. Thanks were voted to the chairman and the directors, and the meeting adjourned for the ballot. It was afterwards held, that the effect of the poll being granted, was to throw open the whole election; and the poll accordingly took place for four directors—the whole, except Mr. Blount, being voted for, with the following result:—For Mr. Curling, 4001; Foster, 4001; Taylor, 4001; Meek, 2430; Knight, 1571. The four first-named gentlemen were accordingly declared duly elected.

LANCASTER AND CARLISLE RAILWAY.—At the approaching half-yearly meeting, resolutions will be submitted for a conditional contract between the Lancaster and Carlisle, the London and North-Western, and Caledonian Railway Companies, and the Scottish Central, for a lease to the three former companies, of the Scottish Central and its branches, and relative to the payment of dividends on the recently created new shares, and the protection of the company's interests, as affected by any bill which may be introduced into Parliament in the ensuing session.

LONDON, SALISBURY, AND YEOVIL RAILWAY.—The committee announce that they have concluded the arrangement with the London and South-Western, enabling them to make the return of 1*l.* per share, and have received a guarantee from the London and South-Western for payment of the further sum of 1*l.* 10s. per share on each of the shares in the event of the bill, for which the South-Western intend to apply to Parliament, for making a railway in continuation of or out of the Basingstoke and Salisbury, at Salisbury to Yeovil, obtaining the Royal assent.

The contract for sleepers on the South Staffordshire Railway amounts to 50,000*l.*

The Midland Railway is in want of 2000 coal waggons for its mineral traffic.

NEW FOUNDRY AT CHESTERFIELD.—We understand that a new iron foundry—for casting only—is about to be erected on the river, near Bishop's mill, a short distance from the railway station. It is said that the parties connected with the proposed undertaking, have contracted for a portion of the chairs and rails for the Ambergate, Nottingham, and Boston Railway.—*Sheffield Iris.*

PROGRESS OF THE ATMOSPHERIC RAILWAY SYSTEM.

A special trip (preparatory to the opening) was taken upon the Croydon Atmospheric, from New-cross to Forest-hill on Thursday last. Nearly the whole of the distance is upon an incline of 1 in 100. Capt. Codington was in attendance, and was accompanied by Mr. Wilkinson, Mr. Crowley, Mr. Schuster (directors); and Mr. Peter Clark, the superintendent of the line. The trip was interesting only so far as it afforded something like an indication of the power of the 15-inch atmospheric pipe up a long and severe gradient.

The train, which consisted of four carriages, weighing about 16 tons, ran through from New-cross to Croydon without stopping—that is, the train, after the piston left the section of the pipe laid down from the New-cross station to the engine-house at Forest-hill, was carried by its own impetus up the incline between each engine-house and the station at the latter place, and down the short incline from the station to the next length of pipe. The time occupied in running, from a state of rest, from New-cross to the quarter mile-post at the Forest-hill station—viz.: 2¾ miles—was 5 minutes and 21 seconds, showing a speed of about 30 miles per hour. The breaks were put on rather heavily as the train approached the Forest-hill station, and greatly retarded the speed of the train. We believe this was done to avoid running at a high velocity round the very short and sharp curve that carries the train to the down side of the station. But for this the 2¾ miles would have been accomplished up the New-cross incline in rather less than 5 minutes, or at a speed of 36 miles per hour. The highest velocity reached with this light train of 16 tons was immediately previous to the approach to the viaduct over the Brighton Railway. The train at this point attained a speed of nearly 60 miles per hour.

The return train consisted of seven carriages, weighing nearly 30 tons. The highest speed reached by this train was 56 miles per hour.

A second trip, which was not accompanied by Capt. Codington, or any of the directors, was taken up the New-cross incline with the same carriages. The train started at 1 hour 42 minutes 6 seconds, and reached Forest-hill at 1 hour 50 minutes 30 seconds, giving a speed of something less than 20 miles per hour.

IMPROVED LOCOMOTIVE ENGINE.—Mr. M'Connell is constructing, at Sharp, Brothers, and Co.'s, Manchester, a new engine, according to his own plans, which, it is expected, will be able to convey trains of passengers *from London to Birmingham in two hours*—the shortest time ever contemplated, and, consequently, the greatest speed yet attained on this line. The principle upon which the construction of this engine consists, is in its possessing a large amount of direct heating surface for the generation of steam: the present plan of engine is now too limited in that particular of generating steam of high-pressure speed; and, to remedy this defect, it is intended in the new engine to carry the rapid production of steam at high velocities to the greatest possible extent. The present time allowed for the express trains from London to Birmingham is three hours; and a reduction of one hour upon that rapid pace will, if safely carried out, prove an immense advantage.—Mr. M'Connell, who has been for the last six years engineer of the Bristol and Birmingham, is now appointed to the highly-important situation of engineer of the locomotive department of the southern division of the London and North Western Railway, which includes that portion of the line formerly known as the London and Birmingham. Mr. M'Connell succeeds Mr. Bury (who filled the situation the last nine years, and who has lately resigned), with the general consent of the profession—few men having attained such eminence as a practical engineer in England in so short a period. His has been comparatively a short, but most honourable and successful, career: during the time he was engineer of the Birmingham and Bristol line, he has had the arduous task of working both broad and narrow gauge, on perhaps the most difficult line in the kingdom, and which he now leaves in the most satisfactory state. Considerable improvements have been made under his management, not the least of which was the working of the Lickey incline by means of his large engine.

MR. NEVILLE'S IRON BRIDGE FOR RAILWAYS.—In the *Mining Journal* of the 5th Dec., we gave an account of the erection of an iron bridge on the system of Mr. Neville, C.E., at the Brussels station of the Northern line, and the various experiments made, under the direction of a Government commission, to test its solidity. Although the experiments resulted, in every respect, satisfactorily, the Government commissioners, to assure themselves beyond all doubt of the flexibility and strength of the structure, demanded that it should be submitted, for the space of 15 days, to a continuous and considerable weight. Waggons filled with iron, stone, and other heavy material, weighing altogether about 20,000 kilogrammes, were therefore placed on the bridge, and should have been removed in the specified time, but in consequence of the indisposition of the president of the commission, they remained there for three weeks. This last experiment has not been less successful than those previously made. The bridge did not yield in the slightest degree, although it had to bear this enormous weight eight days longer than the commission had judged necessary. It is stated, that the success of this system of railway bridges is now beyond doubt, and will be generally adopted in Belgium. The expense of construction falls far short of those now in use.

PROPOSED DOCKS AT SWANSEA.—The construction of docks in the port of Swansea is by no means a novel project, having many years since been brought under public notice, but was not followed up. Some 12 or 18 months since, however, when railway and other enterprises attracted general attention, it was again resumed by parties possessing much local influence, who placed the matter in a tangible shape, and have now formed a company for carrying out their objects. The vastly increasing trade of Swansea, the great quantities of ore brought in, and the relative quantity of manufactured metal exported, at once attracts attention, as securing to the proprietors an ample dividend on the capital employed, which, in the first instance, is estimated at less than 100,000*l.*; while great advantage must arise to the smelter, the colliery proprietor, and the trade of Swansea in general, and in its vicinity. It need hardly be observed, that the facilities afforded by the construction of the proposed docks must tend to lower the charges in freight and dues, and thus have an advantageous influence on the consumption of produce. The prosperity of Swansea as a port was formerly exclusively dependent on the smelting-works; but, within a very recent period, extensive iron-works, zinc and tin works, alkali, and other manufactories, have sprung up with extraordinary rapidity, and the increase of the population in the district has exceeded the ratio of any other in the kingdom; and when it is borne in mind, that all this has been effected with imperfect means of communication inland, and want of proper accommodation in the harbour, to which only vessels of a certain tonnage and build can resort, what may not this town be expected to arrive at, when railway communication is complete, and docks formed, admitting vessels of every size and from every country? It is truly observed, in one of the reports made to Government on the subject—"Of all the ports in the Bristol Channel, there are, perhaps, none more favourably situate than Swansea;" and in directing attention to the subject at the present moment, we are led to do so, not only from the circumstance of the early assembly of the Legislature, but from an important meeting of the Town Council, lately held at Swansea, called especially for considering the propriety of rescinding a resolution of 11th December last, as to dissenting from the Swansea Docks Bill—and, in case such should be the opinion of the meeting, then to consider the expediency of assenting to the same—and from which there were but four of its members absent; and, after a lengthened discussion on the advantages which would result from the proposed plan, it was unanimously resolved to support the measure. The increase of shipping to the port of Swansea has kept pace with the vast increase of population mentioned above; for while in 1814 only four vessels, trading to foreign ports, entered the harbour, in 1844 the number was 437, and in 1845 the number of ships frequenting the port, exclusive of the above, was 4132—a fact which speaks volumes in favour of the project. A most eligible site has been obtained, and one which will not be very expensive, as it consists of sand banks, land of no great value, and a few houses; and it is estimated that 70,000*l.* or 80,000*l.* will be ample for purchase and construction—under which circumstances a very large return may be relied on for the capital invested.

COAL IN NEW SOUTH WALES.—Mr. Howe, the late town surveyor, has returned to Port Philip from Philip Island, having been successful in discovering some large seams of coal. He had obtained about 12 tons, when he was compelled to desist from further operations, in consequence of the inclemency of the weather.—*Port Philip Patriot.*

STRIKE AMONG THE MINERS IN SOUTH STAFFORDSHIRE.—Several meetings have of late been held by large numbers of the colliers in South Staffordshire, the object of which was to concert measures for a general strike, in the event of the masters refusing to accede to their demands of continuing the present rates of wages for two hours less work a day. The masters have had several meetings also on the subject, and seem determined to resist the demand. Should the price of coal be further advanced—and this would be the inevitable result of a strike—the sufferings of the poor in the midland counties, in the present inclement and very severe season, will be dreadful.

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—We still continue to drive the cross-cut south in favourable ground in the 28 fm. level. The 18 fm. level, west of flat-rod shaft, produces from 1½ to 2 tons per fm. The 12 fm. end west is producing about 1 ton per fm. In the 18 fm. level west we have not yet discovered the lode east of alide; the adit end is greatly improved, producing at present good stones of ore; gossan lode 18 in. wide. At Clon Mines, the tributers are from 35 to 40 men employed, and averaging prices 5*l.* per ton. I hope to ship a cargo of lead next week.—T. Angove: Jan. 8.

BEDFORD UNITED.—At Wheal Marquis, the lode in the 80 fm. level east is 18 in. wide, producing good work. In the 70 fm. level east the lode is 2 ft. wide, and worth about 3 tons of ore per fm.; in Michell's winze, in this level, the lode is 18 in. wide, some saving work. There has been no lode taken down in the 58 fm. level east; and in Crew's rise, in this level, the lode is without alteration. At Wheal Tavistock, the lode in the 47 fm. level east and west, is much the same in appearance as for some weeks past. In the 35 fm. level east the lode is 16 in. wide, composed of spar, mundic, and ore, very kindly; in the south engine-shaft the lode continues split, and about 6 ft. wide—spar, gossan, can, and ore; in the adit level east the lode is 3 ft. wide, mundic, peach, and stones of ore, a very promising lode.—J. Phillips: Jan. 12.

CALLINGTON.—In the cross-cut, driving at the 125 fm. level, the ground is hard. In the 112 fm. level driving north we are opening ground that will work at a moderate tribute; in the south end the lode is large and promising, producing silver-lead ores. In the 100 fm. level north the lode continues disordered; in the south end we are opening tribute ground. The men belonging in the 90 ends are now sinking a winze below the same; the lode has not been taken down. In the 80 fm. level the lode is producing silver-lead ores. At the north mine, in the 100 fm. level south, we are opening ground that will set at a low figure; in the north end the lode is producing silver-lead ores. In the 90 fm. level south we are opening ground that will work at a moderate tribute; in the north end the lode looks more promising. In the 80 fathom level south the lode is producing silver-lead ores. In the 70 fm. level east, on the copper lode, the ground is favourable for driving; we expect shortly to meet with the cross-course; the lode is split in branches, producing copper ores. We sampled on the 8th inst. 100 tons of silver-lead ores.—J. T. Phillips.

CARADON UNITED.—We are still driving at our engine-shaft on an angle of 20°, west of south, and shall in a few days commence to drive due south, and do not think we shall have to cope with such difficulties as before, as the lode and branches are considerably drained, and hope in a short time to see our north lode; the ground in the end is now much more favourable for driving, and appears to be kindly for ore.

COOK'S KITCHEN.—In Chapple's lode, at the engine-shaft, we have not yet completed the plat in the 180 fm. level, having been engaged in sending down the balance-bob to the 126 fm. level, which has retarded our operations at the former place; in the 180 fm. level west, the part of the lode on which we are driving is 3½ ft. wide, and worth 10*l.* per fm. We have, I am glad to say, holed the winze from the 160 fm. level to the 170 west, and shall now commence breaking good tinstuff, in large quantities, from this place. In the winze, sinking from the 148 fm. level to the 160 west, we are carrying about 4 ft. of the flookan part of the lode, which is producing a small quantity of tin, but we expect that the other part of the lode, which we shall meet with in going down, is much better; in the 160 fm. level west, on the south part of Chapple's lode, the part on which we are driving, is 3½ ft. wide, and worth 10*l.* per fm. In the 148 fm. level east, the part of the lode on which we are driving is 3 ft. wide, and worth 8*l.* per fm.; it is now about 3 fms. from being under the east shaft; new east shaft is now down about 5 fms. under the 140 fm. level, where the part of the lode on which we are are sinking is 3 ft. wide, producing good stones of tin, and probably worth from 5*l.* to 6*l.* per fm. In the 92 fm. level west, on Eudy's lode, the lode is small, and producing but little tin. In the 80 fm. level east, on North Tincroft lode, we are still poor. We shall send to the smelting-house on Friday, the 15th inst., about 10 tons of tin, which will make, with the last sale, about 25 tons for the month; but, as we have now laid open some very good tin ground, we shall be enabled, in future, to make an increase on this quantity, that will be considerably felt.—Joseph Vivian: Jan. 11.

CUBERT SILVER-LEAD MINES.—The sumpmen are engaged in cutting the whim-plat, in the 35 fm. level; next week we hope to begin to sink for the cistern and bearers. In the 25 fm. level, driving east, the lode is 1 ft. wide, yielding some good work (a promising end); in going west, at this level, the lode is 15 in. wide, and worth from ½ to ¾ ton of ore per fm. In the 15 fm. level west the lode is 10 in. wide—4 in. of which is a rich leader of ore; the eastern end here is a large rich-looking gossan, and producing stones of blue and white lead. The tribute pitches, on the whole, are looking favourable.—R. Rowe.

EAST CROWNDALE.—Since my last, I beg to inform you there has been but little change in the lode in the 30 fm. level east; it is 14 in. wide, composed of flookan, spar, capel, white iron, and a small quantity of mundic and spots of copper ore. The bunches of ore below the 20 fm. level, east and west of the winze, do not look so well as they did—the ore ground is pretty near spent; on the cross-course south, in the 20 fm. level, the ground has considerably improved in the past week; the appearances, otherwise, are much as usual. Our new engine-shaft is in good course of sinking, and there appears to be a change in the ground for the better. We have commenced sinking a new shaft on the eastern part of our sett, to intersect the lead lode in very favourable ground.—S. Paull: Jan. 9.

EAST TAMAR CONSOLS.—At Whitson, the ground in Hitchins's shaft is very much improved since last week's report—it is more favourable for sinking. The lode in the 54 fm. level south is 18 in. wide—fluor spar and silver-lead ore; the lode in the 54 fm. level north is 2 ft. wide, saving work. The lode in the 46 fm. level south is 1 ft. wide, with a small portion of ore. At Furzehill, the lode in Harrison's shaft, is 2½ ft. wide, saving work. The lode in the 38 fm. level north is 2 ft. wide, fluor spar and silver-lead ore; the lode in the 38 fm. level south is 20 in. wide, saving work. The lode in the 30 fm. south is 2 ft. wide, saving work, very much improved since last report. We expected to put our stamps to work last week; but, in putting in the sweep rod, we met with an accident in breaking it, which caused the delay for a few days; I expect it will work to-day.—B. Robins: Jan. 12.

GREAT MICHELL CONSOLS.—In the 22 fm. level, east of the engine-shaft, the lode is composed of gossan, spar, mundic, and spots of ore; in the 22 fm. level, west of the engine-shaft, the lode still presents that kindly appearance of gossan of the first description, with some rich black and yellow copper ore. The engine-shaft is down below the 22 fm. level 4 fms. 5 ft.—T. Richards: Jan. 12.

GUNNIS LAKE.—At Chilsworthy, I beg to inform you, that there is no important alteration in Bailey's engine-shaft, or the 12 fm. level east, since last report. There has been no lode taken down in the 12 fm. level west.—W. Richards: Jan. 12.

HAWKMOOR.—The lode in the 15 fm. level, east of Hitchins's shaft, continues 3½ ft. wide, producing stones of ore in places.—P. Richards: Jan. 12.

HOLMBUSH.—The shaftmen have finished their contract in stoping down the piece of ground from the 110 to the 120 fm. level. The lode in the 120 fm. level, west of the great cross-course, is 20 in. wide, and worth 45*l.* per fm.; there is nothing new to report on with respect to the men that are employed in making this level in a proper state for a railroad. The ground in the rise, above the 110 fm. level, is still favourable; and, being in the junction of both lodes, we often find good stones of copper and lead ores. The lode in the 110 fm. level is 1 ft. wide, composed of spar and lead—worth 6*l.* per fm.; the lode in the winze sinking below the 110, between the great cross-course and the slide, has a more kindly appearance; the wall of which, at the bottom of the winze, is very regular indeed, but we have not taken down the lode since last setting-day—we cannot, therefore, speak of its value. The lode in the 100 fm. level south is 3 ft. wide, composed of flookan, spar, prian, and stones of lead; and at present there is a pretty deal of water issuing from the end, which makes us think we are getting near some east and west lode (perhaps the flap-jack lode). We have this day sampled our lead ores, computed 10 tons—samples of which have been sent to the different companies who purchase that article; we shall be obliged to erect a small oven to burn a quantity we have by us, ere we can offer it for sale, being a mixture of lead and white iron.—W. Lean: Jan. 12.

KIRKCUDBRIGHTSHIRE.—Driving the 30 fm. level, west of Stewart's shaft, the lode is worth 3*l.* per fm.; the same level east is worth 30*l.* per fm. for lead. The stopes in the roof of the 20 fm. level east are worth 10*l.* per fm.; the stopes in roof of same level west are not so good as hitherto—say 30*s.* per fm. The lode in the adit end is 2½ ft. wide, composed of spar and flookan principally.—J. Buzzo: Jan. 11.

LANIVET CONSOLS.—The leader part of the lode in the 80 fm. level east, is 3½ ft. wide, a good orey lode; in the 80 fm. level west, the lode remains much as last reported. In the winze, sinking under the 60 fm. level, west of Elizabeth shaft, the leader part of the lode is 1 ft. wide, good ore. In the winze, sinking under the 30 fm. level, the leader part of the lode is 4 ft. wide, good saving work.—H. Williams.

LEWIS.—The lode in the 60 fm. lev el, east of Wheal Nutt engine-shaft, is 2½ ft. wide, worth 5*l.* per fm. for tin, and very promising. The lode in the 50 fm. level end east is 6 ft. wide, worth 40*l.* per fm. for tin.; we have holed tinstuff at the 50 fm. level, which will enable us to have a better discharge for stuff, and a good ventilation; we are extending the cross-cut south at the 50, west of sump whim shaft, in order to intersect the south branch—ground hard. The lode in the 40 fm. level end east is 18 in. wide, worth 8*l.* per fm. for tin; the lode in the winze, sinking under the 40 fm. level, on south branch, is 8 in. wide, worth 50*s.* per fm. for tin. The lode in the 30 fm. level end east is 2 ft. wide, worth 5*l.* per fm. for tin; the lode in the 30 west, on south branch, is 10 in. wide—set at 11*s.* in 20*s.* for saving the ton. Our tributers at the 10, 20, 30, 40, 50, and 60, are making fair wages at their different tributes. The water and steam stamps are now in a good stamping position—so that we shall be enabled to return much more of our tinstuff.—S. S. Noell: Jan. 9.

MENDIP HILLS.—I have nothing new to report on this week in the underground department. The appearance of the lode in Stainsby's shaft continues much the same, composed of limestone, quartz, iron, and flookan. In the 38 fm. level south the lode is about 6 ft. wide, consisting of limestone, with a large branch of flookan and spar intermixed, near the footwall. Agreeable with orders, I have this morning put some men to work on the slag ground, commencing with a large open trench at the lower part of the ground; as soon as we make any discovery, the particulars shall be made known to you.—F. C. Harpur: Jan. 11.

PENTUAN WHEAL MARY.—We are still driving our adit level towards the main lode; the ground, through which we are driving, being still favourable. Since my last, I put 2 men to costean in search of the south lode, which, having been just cut, I am able to say but little about; but will send more particulars by next post.—J. Chynoweth: Jan. 13.

ROSE CONSOLS.—After crossing, at the 20 fm. level, from the middle lode 12 fms., we intersected the west lode, which is 4 ft. wide, 9 in. of which is moderately good for lead; we have already driven 4 fms. on its course—this is the principal lode yet discovered here, and I have but little doubt that this will be found valuable, especially when we consider the richness of the ore being worth 100 ozs. per ton. We have set the engine-shaft, to sink from the 20 to the 30 fm. level, at 7*l.* per fm., and the various tributes on the lodes from 10*s.* to 30*s.* per fm.—J. Webb: Jan. 9.

SILVER VALLEY.—The engine shaft is sunk 3 fms. 1 ft. below the 40 fm. level, and the ground is tolerably favourable; the levels on the tin lode are suspended driving for the present, and we have set more tribute ground, having now 24 tributers, who are working with spirit, and will raise a fair quantity of tinstuff this month. At the silver mine, in the 30 fm. level, driving east, the lode is improved since we commenced driving; it is about 9 in. wide, intermixed with silver-lead ore; the lode in the stopes, in the back part of this level, is 3½ ft. wide, producing a small quantity of silver, but not rich; in the stopes, west of the shaft, in the back of this level, we are raising some good work; in the stopes, in the bottom of this level, the lode is 15 in. wide, producing some saving work, and good stones of silver occasionally. The lode in the 20 fm. level west is split into two parts, which are small; the north branch is composed of carbonate of iron, with spots of lead, and small particles of grey silver. The lode in the 10 fm. level east is 1 ft. 6 in. wide, and without any important alteration since last report, composed chiefly of flookan. At Callington Commons, in the adit end driving west, the lode is 2 ft. wide, with quartz, mundic, and flookan, containing small cubes of lead in places, and very promising. At Wheal Sisters, in the adit end east, the lode is at present poor, and we intend to take the men from the end, to work the silver ground in the back and bottom of the level, which will be available in stoping.—S. Richards.

SOUTH TAMAR UNITED.—Should the weather continue favourable this week, our engine-house will be completed. We are still engaged in clearing and securing the adit level as expeditiously as possible.—B. Robins: Jan. 12.

SOUTH WHEAL TRELAWNEY.—The ground in Snell's shaft is much the same as last reported; we have, during the past week, secured it by timber, and divided the engine-shaft from the whim-shaft, fixed ladders, and made all complete. We shall continue to divide the shaft as we sink, for security for the men; we have also erected the horse-whim, puppet heads, &c. Sobey's lode, in the adit level south, is 2 ft. wide, composed of gossan, mundic, sprigs of lead, and soft white killas. We are also busily engaged in removing earth, carrying stones, lime, &c., for building purposes.—W. Lean: Jan. 9.

TRELEIGH CONSOLS.—The Christoe shaft, below the 100 fm. level, is sinking in the country, ground rather more favourable; in the 100 fm. level, east of ditto, the lode is 3½ ft. wide, worth about 14*l.* per fm.; in the 100 fm. level, west of ditto, the branch is small, without mineral. In the winze sinking below the 90 fm. level, east of ditto, the lode is 3½ ft. wide, worth about 30*l.* per fm. Garden's shaft, below the 90 fm. level, is sinking in the country, ground more favourable; in the rise above the 90 fm. level, west of ditto, the lode is 18 in. wide, worth 6*l.* per fm. In the 80 fm. level, west of the lode, the lode is 3½ ft. wide, producing good stones of ore, and kindly for improvement; in the winze, in the 80 fm. level, east of Garden's shaft, the lode is 1 ft. wide, very little ore. In the 70 fm. level, west of Good Fortune, the lode is 4 ft. producing some good stones of ore, and promising. In the 60 fm. level, west of Symons's, the lode is 20 in. wide, with stones of ore and mundic. In the 50 fm. level west, on north lode, the lode is 10 in. wide, spar and flookan. In the 44 fm. level west, of Symons's, the lode is 2 ft. wide, worth 5*l.* per fm., and looking kindly for improvement. In the 20 fm. level, west of ditto, the lode is about 1 ft. wide, more kindly than it has been for ore. In the adit cross-cut south, we are driving south to the west shaft, not much done this week, not having air to work.—Jan. 9.

NORTH WALES MINING COMPANY—*Vigra Mine* has been worked very extensively, but only to a depth of 20 fms. below the deep adit; and that by powerful pumping machinery, which is now in a very perfect state, and of sufficient power to prove the mine to an extensive depth. Should the mine prove sufficiently productive to warrant a more efficient method of working it, I would then recommend commencing a new level adit near the pumping engine, where it would, by driving, intersect at least three lodes before reaching the mine (deep workings), and come in a very great depth below the present bottoms. From accounts, a large quantity of copper ores has been sold from this mine, as also from the lode south of it; and, according to their dips, they must form a junction with each other, about 20 fms. below the present bottoms; a position which is very interesting, and which is most likely to prove more productive from all practical experience of mining, than any other, inasmuch as both lodes have been found rich, opposite each other. At present, Vigra deep workings are poor, yet there is some high ground which will pay well for taking out. Strange as it may appear, the south lode has not as yet been cut as low as the deep adit, and which I would recommend doing to ascertain its value at that level, before sinking Vigra sump to a greater depth. The direction of Vigra lode is nearly east and west, and that of the lode south 45° south of west magnetic. Both lodes are imbedded in a strong clay-slate formation, and are chiefly composed of quartz, sulphur, pyrites, talc, and copper. The appearance of the other two lodes farther north does not, in my opinion, recommend any further outlay, until Vigra lode, and that to the south of it, are proved to a greater depth.—*Clogau Mine* has been found most productive on the junction of two lodes running nearly north and south, and has been worked to a depth of nearly 30 fms. below surface. The dip of the lodes is east, and the shoot of ore south; and from the present method of extraction of the water and ores from this mine, it is become very expensive, in consequence of the ore ground having gone off so far south from the engine-shaft, and so much below it, that they have to draw the water, and stuff twice over by manual force, before conveying it to the engine-shaft. To avoid this expensive method of extraction, I would recommend sinking a new shaft from surface at once, down direct on the branch of ore, and which can be completed for 300*l.*; after which, should the ore continue good, I would engage to give 200*l.* per month profit to the adventure. Whereas, the present system of working the mine can never give a satisfactory return. *Iyddynygbwadis Mines.*—First, I would notice Mostyn Mine, which is rich in silver-lead ores, and in its infancy, although upwards of 168 fms. of lode have been laid open from 2 to 4 ft. wide. The same can be extracted for 30*s.* per fm.; and provided every fathom contain 6 tons, it can be raised, dressed, and made marketable, for 8*s.* per ton, which will leave a profit of 100 per cent., independent of the gold it contains. Another lode is also imbedded in a clay slate formation; it is composed of quartz, arsenical pyrites, a little copper and talc; and its richer parts are more or less intermixed with decomposed clay slate. Its underlay is from 18 in. to 24 in. in a fathom, and that north-east. The copper vein, opened a little further south-west, contains remarkable fine specimens of yellow copper, and the whole of the stratification, which it is embedded in, is impregnated with copper throughout; and, what is still more extraordinary, and not less interesting, the samples taken from the same end, about 3 fms. from the river, have been found very rich for gold, which of course is quite a new feature, and in its infancy. The lode is about 2 ft. wide, composed of decomposed clay slate, quartz, sulphur, and copper. The Dingle lode, south-east of the Mostyn Mine, has been laid open near the river, where it contains a quantity of lead, a sample of which I have taken to the office. Should it be found valuable by assay, the extraction of that ore will be found particularly easy. From the direction of this lode, it must intersect the Cwmhesian western lode, which is now being driven on, where they have some very good silver-lead ore, and which end has shown a considerable improvement during the last 14 days. The lode is from 18 in. to 20 in. wide, composed chiefly of clay slate, sulphur, quartz, and lead. The lode further north is the continuation of the Cwmhesian Gold and Silver-lead Mine, and which has not been laid open to any extent further than a pit or two, sunk a few feet in depth on it. In one place it has been explored 18 ft. wide, and then not to its full width, and which is composed of smoked quartz, sulphur, talc, a little copper, cobalt, &c.; in fact, it is one of the finest specimens of a copper lode on the back, traced to a greater extent in length, that I ever met with. The great width I can account for, from two other lodes, one from the north, and another from the south, intersecting it just where the pits are put down—a position which, I have every reason to believe, will prove very productive in depth. *Dolfrwynog Mine* has been worked very extensively, and many thousands pounds of copper ore have been sent to the market; but from the bad management, as I have been informed, in carrying on the mining operations, it was abandoned at the depth of 11 fms. below adit; and, from the soft nature of the ground, the workings soon fell together, which have never been laid open since that period. This lode has been explored to a great extent in length, and I have seen it as much as 12 ft. wide, and that only part of its width, which is composed of one mass of hard arsenical pyrites, and gossan. From examining the different levels cleared, I find the whole of the riches, extracted from this mine, have been taken from east of the large flookan (cross-course), which by measurement in one cross-cut level, measures 107 ft. wide, and on the west side, under the hanging wall of this large flookan, the lode has not been laid open. It has been found by assays of Dolfrwynog lode, that there is a quantity of gold in the sulphur and gossan which it contains.—W. Williams.

TRETOIL.—The lode in the 80 fm. level east is 1 ft. wide, a good orey lode; in the winze, sinking under the 70, the lode is 9 in. wide, producing but a small quantity of ore; we have cut the lode to the east of the cross-course at the 70 fm. level—it is a foot wide, producing stones of rich grey ore, and opening ground that will set at a moderate tribute. We are driving east and west on the lode in the 40 fm. level, and also driving the cross-cut south; in the western end the lode is 1 ft. wide, producing but a small quantity of ore; ditto east, the lode is 15 in. wide, good saving work.—H. Williams.

UNITED HILLS.—In the 90 fm. level, east of Williams's shaft, the lode is 3 ft. wide, worth 15*l.* per fm.; in the 90 fm. level west we are taking down the lode by contract, the lode is 3 ft. wide, worth 15*l.* per fm.; in the stopes, in the back of the 90 fm. level, west of Williams's shaft, the lode is 3 ft. wide, worth 18*l.* per fm. In the 80 fm. level, east of Williams's shaft, the lode is 3½ ft. wide, worth 16*l.* per fm.; in the 80 fm. level, east of cross-cut, west of Williams's shaft, the lode is 1 ft. wide, worth 12*l.* per fm. In the 70 fm. level, east of eastern shaft, the lode is 3 ft. wide, worth 8*l.* per fm.; in the 70 fm. level, west of James's shaft, the lode is 2 ft. wide, worth 6*l.* per fm.; in the eastern shaft, under the 70 fm. level, the lode is 3 ft. wide, worth 20*l.* per fm.; in the shallow adit end east the lode is large, and coarse in quality. At Wheal Charles, in the 50 fm. level, east of Gibson's shaft, the lode is 1 ft. wide, poor. In the 40 fm. level, east of ditto, the lode is 4 ft. wide, worth 16*l.* per fm.; in the winze, under ditto east, the lode is 3½ ft. wide, worth 10*l.* per fm.; in the stopes, in the back of ditto, the lode is 3½ ft. wide, worth 10*l.* per fm. At Wheal Sparrow, west of Tonkins's winze, the lode is 2½ ft. wide, worth 4*l.* per fm. In the 30 fm. level, west of Turner's shaft, the lode is 3½ ft. wide, unproductive. In Turner's shaft, under the 30 fm. level, the lode is 2 ft. wide, worth 6*l.* per fm.—T. Trevenen; R. Williams: Jan. 11.

VICTORIA.—The engine-shaft is down 2 fms. 3 ft.; the ground through which we are sinking being of a decomposed granite, we are obliged to close timber. We are driving a level from wheel-pit to shaft, for the purpose of carrying off surface water, which will be of great benefit in sinking the engine-shaft. Since the weather has become finer, we are progressing very favourably with our surface operations.—James Chynoweth: Jan. 13.

WEST WHEAL JEWEL.—In Wheal Jewel lode no alteration in the past week. In the 12 fm. level, west of Quarry shaft, on Tolcarne tin lode, the lode is 1 ft. wide, worth 6*l.* per fm.; in the 12 fm. level, west of old sump shaft, on same lode, the lode is 9 in. wide, worth 7*l.* per fm.; in the winze, in the bottom of the 12 fm. level, west of Quarry shaft, on same lode, the lode is 1 ft. wide, worth 15*l.* per fm.; in the winze, in the bottom of the 12 fm. level, east of Quarry shaft, on same lode, the lode is 15 in. wide, worth 8*l.* per fm. In the winze, in the bottom of deep adit, west of Quarry shaft, on same lode, the lode is 2 ft. wide, worth 28*l.* per fm.—R. Johns: Jan. 11.

WHEAL AGNES.—The lode in the adit level east is much the same as last reported; the lode in the adit level west is very much improved.—B. Robins.

WHEAL ADAMS.—The rise in the back of the 50 fm. level, on the eastern lead lode, is very much improved this last week, the lode is 18 in. wide, worth 12*l.* per fm.; I think we have got into the bunch of lead that they say is gone down in the bottom of the 40 fm. level. The 50 fm. level, driving south on the western silver-lead lode, is a little improved; the lode is 2½ ft. wide, worth 7*l.* per fm. The winze sinking under the 40 fm. level, to come down on the rise from the 50, is poor—we expect to hole in a day or two. At the cross-cut driving west at the 28 fm. level we are driving in a large gossan lode; we have gone through a lode about 12 ft. wide, between the gossan, that works on tribute from 8*s.* to 10*s.* in the 1*l.*; the cross-cut has paid for itself in driving, from the lead from it; the tribute pitches are looking well. We have about 10 tons of lead down at the cellars, and about 60 tons of brown jack; and, if the weather holds favourable, we shall soon get 100 tons, and a good sampling of lead; our floors are now so full of stuff that we do not know where to put it; the frost has thrown us back in our dressing; we have set three tribute pitches since our setting-day at 12*s.* in the 1*l.*—T. Moyle: Jan 12.

WHEAL ANDERTON.—Having discovered the northwall of the lode, 6 fms. under the 50 fm. level, I am now in a position to state its size and properties at that depth. Two feet of the lode, being the leader on the north wall, is very good, worth 60*l.* per fm.; 3 ft., south of the leader, good work in course of stamping, worth 20*l.* per fm.; 2½ ft. passed through the shaft, worth 15*l.* per fm. As the lode inclines south in depth, on an angle of 18°, we shall again see its full size in cutting a plat at the anticipated 60 fm. level, where, in all probability, a sufficient quantity of ore will be raised to remunerate the adventurers for their spirited and unflinching perseverance.—J. Carpenter: Jan. 13.

WHEAL BARBARA.—The lode in the east end is increased in size since my last report, productions and stratum nearly as last report. I have much pleasure in announcing that we have intersected No. 1 lode in the ravine cross-cut, where the back of it, at only 3 ft. in the solid ground, is about 4 in. wide; at the bottom of the level, 6 ft. deeper, it is 9 in. wide, composed of gossan, spar, jack, and a good portion of lead throughout, with a little copper; from the very highly mineralised quality and increasing size of this lode here, as well as at the east, I think we may, at a reasonable depth, expect it large and very productive, and that the mine will soon class among those giving good dividends.—Jan. 9.——In the ravine adit, the lode is daily improving in size and quality as it gets in deeper ground, and is yielding some good produce of ore.—W. H. T. Stephens: Jan. 12.

WHEAL CONCORD.—In the 38 fm. level west, the lode is 2 ft. wide, quartz, and mundic. In the 28 west, the lode is 2½ ft. wide, producing spots of lead; in the 28 east, the lode is 2 ft. wide, chiefly quartz. In driving the 20 south, the killas has now become deep blue, with strings of mundic disseminated through it, which I consider congenial for mineral in the lode before us. The new lode in the 20, driving west, is 3 ft. wide, quartz, and flookan; the rise in the back of this level is holed. The lodes in the ends generally are of a more favourable character than for some time past. The stopes look well.—J. B. Clymo: Jan. 14.

WHEAL ST. ANN.—The progress of this mine is highly satisfactory. An adit has been driven about 16 fms., and several branches producing good ore have been met with; at the west end of the adit a shaft has been sunk 38 ft. deep, passing through a very strong branch of spar, thickly interspersed with yellow copper ore, of a very fine quality; from the general nature of the country, and strong indications, I feel warranted in supposing that I am approximating a lode of great importance.—J. Penrose: *Drewsleignton, Devon, Jan.* 13.

WHEAL WALTER.—Last Saturday being pay-day and setting day, I beg to inform you, that in the 20 fm. level west, we have set two men at 25*s.* per fm.; in the 20 fm. east, two men at 25*s.* per fm. In the 30 fm. cross-cut south, six men at 50*s.* per fm. On the B lode, two men at 30*s.* per fm. No fresh discoveries at present.—James Opie: Jan. 13.

FOREIGN MINES.

ALTEN MINES.—*Dec.* 4.—In the mining department there is little to add to my last report; the lodes at Raipas are equally good, and in about a fortnight we hope to clear the run in shaft No. 2, and recommence operations on the profitable stopes in the eastern part of the mine. The new lode at Ryper's is very promising, and yields good returns of ore; that above the old mine has also improved. We shall resume the transport of the Raipas ore on Monday, and, by the end of the month, hope to make some good returns to the smelting-house. Our November month's produce, notwithstanding the temporary falling off in the Raipas returns, will be about 9 tons of copper.—S. H. Thomas.

[FROM CORRESPONDENTS.]

Iberian Silver-Lead Ore Company.—The Sierra Almagrera, in the province of Murcia, situate on the south-east coast of Spain, has for ages been remarkable for the richness and quantity of its mineral productions, particularly lead and silver, found generally in the state of argentiferous galena. We have before us a prospectus of a company, formed for the purpose of smelting and refining these ores under a new process, which has been secured to the company under the patent laws of Spain. They have purchased two large smelting establishments, with necessary offices, shops, &c., which are being remodelled on the most modern and improved principle; and on the arrival of the powerful machinery from Scotland, where it is being manufactured, they will very soon be in a situation to commence operations. It will be understood that this company is not one of adventurers in a mining speculation—it is formed for the purpose of smelting only; a constant and abundant supply of the ores can be purchased dressed ready for the furnace: there is, therefore, none of the usual expense, risk, and disappointments, generally attendant on the working of mines; purchasers make their own assays, and offer their price, which, if accepted, the ores are carted away to the smelting-works. The following extract from a paper, by Mr. J. Michell, read before the annual meeting of the Geological Society of Cornwall, Oct. 16, 1845, is interesting:—"A paper was furnished by Mr. James Michell on the argentiferous lead mines of the Sierra Almagrera on the south-east coast of Spain. The writer gave some account of the workings of some ancient mines in the mountains, and thought it probable that they were closed up after the celebrated edict of Philip of Austria, who sought thereby to obtain miners to explore the vast resources of the American mines which were opening up about that period. The mines of Spain, with the exception of the quicksilver mines, had, therefore, lain dormant for centuries, until, in 1839, a person named Perdigou accidentally stumbled upon a small vein of galena on the Sierra Almagrera. This led to the discovery of a very rich lode, which was eventually worked by Julian Lopez and other parties, and which, during the last five years, has probably had no equal in Europe for productiveness, and been excelled by few in America. The lead contains 400 ozs. of silver per ton, and no quartz has been discovered in any part of the lode; the vein runs into six mines, giving a length of orey ground of 230 fms.; and from October 1839, to the 31st December, 1845, the net profits divided between the respective share-

holders in these mines was upwards of 1,350,000*l.* sterling. The general cost of working was 7 per cent. only on the value of the mineral as sold on the mines." On a comparison of the present method of refining silver-lead ore, with the improved one to be adopted by this company, the following is the result—viz.: old process—lead volatilised, and other losses, 12½ parts in 100; silver remaining in litharge, 3 ozs. per ton. New process—lead volatilised, &c., 5½ parts in 100; silver remaining in litharge, 1 oz. 6 dwts. per ton; and the cost of working in favour of the new is 1 to 3. It is estimated that, when the works are in full operation, 20,000 tons of ore will be smelted and refined annually; but taking 6000 tons as a minimum, the promoters calculate thereon a profit of 12,000*l.*, equal to a dividend of 20 per cent. The capital is proposed to be 96,000*l.*, in shares of 1*l.* each; and at a future period, to increase the working capital by 12,000 reserved shares being issued at 12*s.* 6*d.* per share, free from further calls, but to participate conjointly with the other shares in the profits.

WHEAL BENNY.—We learn that, the majority of the shares having passed into the hands of some influential capitalists, the management will henceforth be carried on in London, the mine being divided into 256 shares, and will be continued to be worked on the Cost-book System; and immediate steps taken for prosecuting it on an extended scale by sinking the present shaft with additional force, and driving the cross-cut to take the several lodes in depth, which have been seen by costeaning, the rising ground giving a considerable extent of backs. We are given to understand, an addition is likely to be made to the sett; and from the discoveries already made, and its contiguity to Wheal Williams and Lamberoose, and being in the immediate vicinity of Great Wheal Maria, Wh. Martha, and other mines, holds out good promise to the adventurers.

EAST CARADON CONSOLS.—A correspondent informs us, that this mine "still looks well; they are rising for a whim shaft on the course of the lode, and expect to hole in about a month 87 fms. from the back of the level, and about 20 fms. from grass. They had fine stones of ore in the goesan. A meeting of the adventurers is to be convened in about a fortnight."

INTELLIGENCE FROM THE WEST.—Trenow Consols much improved, and bids fair again to become a dividend mine. A neighbouring mine (Wheal Jane), on which a steam-engine, 45 inch cylinder, has been recently set to work, offers great prospects, from discoveries made, of becoming a profitable mine. Shares have been done at good prices during the past week. Alfred Consols continue to hold out extraordinary returns, and shares have been done as high as 60*l.* in the last few days. The Cubert Silver-Lead Mines are progressing very satisfactorily, and it is understood that the next sampling will leave a fair profit. It is gratifying to find that the unfortunate affairs connected with Wheal Providence have been arranged: the company remodelled—now called Wheal Tremayne: large returns are now being made, and, with the present good management, there is little doubt of the shareholders being greatly benefitted, instead of suffering a loss.

ABERGWESSIN SILVER-LEAD MINES.—Some valuable discoveries have, we understand, been made in these mines, in the adit level, and the one 10 fms. below. Two lodes have been cut, and are of an enormous size, one of them being upwards of 30 ft. in width, and from 12 ft. to 15 ft. of which is so rich in silver-lead, that the whole is saved for dressing, and yields 80 per cent. of pure metal. A new engine-shaft is being sunk in a position to cut the lode at 20 fms. or 30 fms. below the adit, where it is fully expected to meet with a splendid course of ore. The company, on Thursday week, had a bullock roasted, and gave their workmen a splendid Christmas dinner, which was washed down with six barrels of good ale; and Mr. P. P. Couch, of Nant-y-Brain House, regaled from 30 to 40 of them on Christmas-eve.

MINING IN SOUTH AUSTRALIA.—Several recent visits to the Burra Burra Mines, by gentlemen who have only returned thence within a few hours, have happily relieved us from the painful apprehensions occasioned by reported disasters and loss of life. The reports were unfounded; and, although two accidents occurred, the men speedily recovered, and extra precautions have since been used. Nevertheless, the nature of the country is described as requiring much more care, and measures of security, than were deemed necessary before the setting in of the rainy season. The extraordinary value and productiveness of the Burra Burra Mines have become more than ever apparent. A gentleman of large experience assures us, that in his belief, with adequate machinery, in aid of the hands at present employed, it would be quite possible to raise 2000 tons of marketable ore within a month; and (to quote the expressions used), "he had neither seen nor heard of anything like it, in England, or any other part of the world." Another gentleman (a shareholder) is regretting the improbability of being able to procure cattle and vessels to carry away the ores as fast as they are produced. We could say a great deal more respecting this astonishing property, but purposely abstain. The accounts from other mines are various, and somewhat contradictory; but we imagine the approaching change of weather, and the renewal of general "road" activity amongst carriers, and those who are now employing their manual and animal strength in the labours of agriculture, will conduce to the bringing to light an extensive variety of mineral wealth, and discoveries as new as they are unexpected by the majority of our fellow-colonists. The information gleaned by the Hon. Capt. Bagot, in the coal districts of New South Wales, and the able calculations of Dr. Davy, will not be lost upon some of the South Australians, to whom the data have been imparted. The leaven of science is already at work. Kapunda (Proper) is more capable of valuable production than ever, although the arrival of the steam-engine purchased for that interesting mine is now become desirable. Some of the new purchases around Kapunda are already seen to be of undoubted value, others are of speculative or prospective value; but we hear of no relinquishment or intended forfeiture of deposit. The mining operations in the coming spring will be increasingly interesting, and (as we hope) more decidedly prudential and well regulated.—*Adelaide Observer.*

IMPORTANT TO THE MINERS OF DEVON AND CORNWALL.

PORTS AND HARBOURS BILL.

SIR,—Last year a bill was prepared by Mr. Ward and Admiral Dundas, which is intended to be this year brought before Parliament, entitled "A Bill for the better management and preservation of the Ports, Harbours, Creeks, Tidal Waters, and Navigable Lakes and Rivers of the United Kingdom of Great Britain and Ireland," containing (in addition to many clauses which vitally affect the interests of the ship-owners and proprietors of harbour property in these Kingdoms), a clause to which the attention of every man having at heart the prosperity of Devon and Cornwall, but more especially of those interested in their mineral resources, should be directed. I refer to the 19th sec. of the bill, which under the modest marginal note "Punishment for throwing over ballast," seeks to enact "That if any person shall throw or deposit, or cause to be thrown or deposited any ballast, gravel, or other matter or thing into or in any Port, Harbour, Creek, Tidal Waters, or Navigable Lake or River, or permit any water charged with the washings of ores to flow into the same, he shall be liable to, and may be indicted and punished for, a misdemeanor, or for the same act he shall be liable to pay and forfeit a sum of money not exceeding 20*l.* nor less than 5*l.*, for every offence, whether more than one offence be committed on the same day or not; and it shall be lawful for any person seeing the offence committed to apprehend the offender and deliver him to a constable, or take him before a Justice of the Peace." This clause is certainly one of the most arbitary ever framed by man, and one which must necessarily involve the stopping of many of the mines in the west of England, and I presume elsewhere. The public should not allow this attempt to extend Government influence and patronage, and to create a system of centralization, in this instance oppressive to all, injurious to the welfare of the realm, dangerous to the liberties of the people, and beneficial only to the younger sons and (indirectly) unportioned daughters of the aristocracy, for whom it provides *snug berths.* AN OLD MINER.

Plymouth, Jan. 6.

MINE SHARE LIST.

SIR,—A share list of prices, when accurate, is a very important document, materially affecting the mining interest, and the buyers and sellers of shares; the transactions quoted should be *bonâ fide*, and not affected by a *ruse*, for a rise or a fall. The amount paid is no criterion of value, *pro* or *con*, except in a small degree as to the extent of workings in a new mine, and the machinery thereon; and even in this respect, inferences would be fallacious without an inspection. The sums laid out by former adventurers, of which there are sometimes three or four companies, with respect to an old mine, are equally fallacious as a test of value. The quotations should be precisely those amounts at which business can be done.—A. T. J. MARTIN: *Penzance, Jan. 6.*

MINE ACCIDENTS.

East Wheal Rose.—As M. Thomas was getting into the ladder at the 80 fm. level, in Michell's engine-shaft, to go up, he slipped his hand and fell away, down to the 90, close to two miners at work there, who immediately went to his assistance, but found him quite dead.

Knowles and Co.'s Fir Grove Colliery, Butterworth, Rochdale.—As C. Hill, aged 13 years, was descending the pit, he fell out of the corve, and was killed.

Rose Bridge Colliery, Ince, near Wigan.—M. Mills was killed here.

Victoria Colliery, Renfrewshire.—As seven men and two boys had entered the cage, to be lowered to their work, some delay occurred, when, unknown to the engineman, six left the bucket, which threw it off its balance—at this moment, the man left the engine to turn the fly-wheel, and the counterbalance being taken from the machinery, by the men leaving, caused it to ascend instead of descend before he could resume his post, when the bucket came in contact with the pit-head framing, the chain gave way, and precipitated the three men to the ground—one young man died on the spot.

Gewen Colliery, Llanelly.—Rees Morgan and J. David were killed, and seven companions severely burned, by an explosion of fire-damp.

Eglinton Iron-Works, Kilmarnock.—As Walter Kennedy and another engineer were inside one of the air-pipes, examining a valve, an explosion of inflammable gas took place, when both were killed.

Clay Cross Collieries, Derbyshire.—W. Cowpe was killed by a fall of roof.

Tibshelf Colliery, Derby.—J. Wass was killed by a large stone falling on him.

NEW BRITISH IRON COMPANY.

The annual meeting of this company took place at the offices, Threadneedle street, City, on Tuesday, the 12th inst.

The chair was taken by WILLIAM ROUTH, Esq.

The notice convening the meeting having been read,

The CHAIRMAN said, that on the 29th of December the directors informed the proprietors that the accounts of the company had been duly audited, and were open for their inspection at the offices of the company. He saw that a great many gentlemen had examined them, and hoped others would avail themselves of some opportunity of doing the same. It was only necessary for him to say, that they would remain open as long as necessary for that purpose. That being the course taken with regard to the accounts, he needed not to say any more on that subject. He begged to state that the transactions for the year had been, upon the whole, satisfactory. Their make of pig-iron during the year had averaged upwards of 1000 tons per week, or 52,309 tons for the year. Their make of finished iron had amounted to 41,944 tons. (Hear, hear.) He had the satisfaction to inform them, that since the middle of last year the directors had made the company's means more productive generally, so that they might fairly look forward to an average produce of 1300 tons of pig-iron weekly, instead of 1000 tons, the average of last year. (Hear, hear.) He hoped when they met again that time 12 months, they would find on the settlement of the accounts things to be quite as satisfactory as on that occasion. The directors intended to declare a dividend of 20*s.* per share, payable on Friday next (15th instant). In conclusion, he would propose that Joseph Hoare, Charles Kerr, John Hurdis Ravenshaw, and John Horsley Palmer, Esqs., be re-elected directors. These gentlemen went out by rotation, but expressed their willingness to serve again, if it should be their pleasure to re-elect them.

Mr. HICHENS had great pleasure in seconding that resolution. He need not mention how satisfactorily that gentlemen had conducted their business, for the result was shown by the dividends. (Hear, hear.) If they should not be still larger, they would have a reserve to meet any contingencies that might happen to the company. He would merely ask, before the question was put, at what period did the increase in their make of iron over last year take place?—was it very lately that they had so largely exceeded the 1000 tons?

The CHAIRMAN replied, that it was since the termination of their financial year, on the 1st October, that their average make of pig was 1300 instead of 1000 tons, as in the former year. (Hear, hear.)

Mr. HICHENS thought that must be exceedingly satisfactory to all the proprietors.—The four directors having been re-elected unanimously, Ralph Ricardo, Esq., was unanimously elected an auditor.—A vote of thanks was then passed with acclamation to the chairman and directors, and the meeting separated.

RHYMNEY IRON COMPANY.

A special general meeting of the shareholders in this company, convened by the directors, in consequence of a requisition from the proprietors, to consider the propriety of repealing, or altering, the 13th clause of the deed of settlement, was held at the London Tavern, Bishopsgate-street, on Wednesday last, the 18th inst.,

THOMAS WILSON, Esq., in the chair.

The SECRETARY having read the advertisement convening the meeting; the CHAIRMAN observed, that the directors had so far complied with the injunction of the shareholders; and he now thought it best to withhold any opinion entertained by the directors, and hear the sentiments of the proprietors assembled first. In answer to a question, how many shares had been applied for? he stated that he believed all. One gentleman, who held 400 shares, was dead, and his executors had expressed their intention to take them: another, holding 250, was abroad—he had been written to, and there was not much doubt but he would also take his proportion.

Mr. COLES CHILD then rose: he said that, having brought the subject forward, he was, perhaps, the proper person to open the business; but he wished it was in abler hands. His object was alone the advancement of the best interests of the company; and if any amendment was proposed, he had no doubt it would be from the same motive. He then took a review of both sides of the question: if an average of even three years was taken, instead of five, the only advantage claimed by the supporters of averages was, that it would equalise the dividends; the only effect he could see it would have, would be the keeping down the shares in the market. He had no objection to leave a large balance in the hands of the directors, as he was satisfied it would be well applied. It had been stated, that dividing annual profits only benefitted speculators: this he could not see, for it was well known the majority of their holders were investors. Mr. Rougemont's plan, which he had in a great measure followed out, was for a division of annual profits; and, having put their hands in their pockets, to relieve the company from its embarassments, they had a right to a division of the profits annually. He was sure the majority, who applied for the new shares, expected this would be the plan adopted; and it would most certainly keep up the value and importance of the shares in the market. A shareholder of to-day might not be a shareholder to-morrow, and was it right that the profits realised upon his capital should be given to another? He then moved a resolution to the effect, that the part of the 13th clause, for making dividends on an average of five years' profit, be repealed; and that the profits be made divisable among the proprietors annually, giving power to the directors to recommend such dividend as they may deem proper, after deducting a reasonable amount for reserve, not exceeding 10 per cent.—A PROPRIETOR here observed, that the usual course was for the directors to recommend the amount of dividend, which was then confirmed, or otherwise, by the proprietors at a general meeting.—Mr. BAILDON seconded the motion.

Mr. THOMAS SMITH, of Ramsbury, said that, by confining the reserve to 10 per cent., the hands of the shareholders, as well as the directors, were tied; and, if they wished to keep back 20 per cent. in any one year, they would not have the power.

Mr. POYNDER viewed with great apprehension the steps about to be adopted: all great measures ought to emanate from the directors; and he thought the present proceedings indicated a want of confidence in them. The proposition, he acknowledged, had been brought forward with great moderation; but he thought, before they proceeded further, they should be put in possession of the views of the directors. He remembered well the drawing up of the clause in question; and the first legal opinion of the day was, that, in a fluctuating trade such as iron, it was the best clause which could be adopted.

The CHAIRMAN said, he would obey the call: it was rather a curious coincidence that the Phœnix Insurance Company, established 50 or 60 years, and who were doing well, were just considering the propriety of altering their rules, and paying dividends on an average of 7 or 10 years' profits—he mentioned this to show they were not singular. With regard to the opinion of the directors, it was not likely seven gentlemen should agree on every point. Ald. Thompson, whose absence from illness he much regretted, was for dividends on annual profits—Mr. Rougemont also; the other five directors were in favour of an average profit of three years, on which to take the dividends; and Ald. Thompson gave up his opinion to the majority. He sincerely believed himself, that, in a fluctuating business like the iron trade, profits should be divided on a term of years, and not annually.

Mr. ROUGEMONT said, the plan he originally proposed, contemplated annual dividends, and everything since had confirmed him in that opinion—banks and assurance companies might take averages, but mining companies always paid on annual profits, and the fluctuations rendered them more necessary.—Mr. WHEELER agreed to everything except the 10 per cent. reserve; he thought it should be left to the directors to recommend what should be left in hand, and the general meeting to confirm it.

Mr. S. J. CAPPER thought the 10 per cent. had better be left out; they should always have a contingency fund, and, although the directors did not want the money, they did not wish to have their hands tied. Whatever was the opinion of the directors, however, if they saw an overwhelming majority against them, they would give way.

The plan suggested by the directors was then read; it was for altering the term of five years in the 13th clause, to three years; and Mr. T. SMITH said, he should support the directors' plan, as he wished for regular dividends, and put an amendment founded on it, which was seconded by Mr. POYNDER.—A very long discussion now ensued, on the relative merits of each plan—when the amendment being put from the chair, 18 hands, including the directors, were held up in its favour; and, on the original motion of Mr. Coles Child, there appeared 24, which the chairman declared to be carried.—Mr. SMITH then said, he should demand a poll—the largest holders of shares were in the minority; and he saw no reason why they should not exercise their right in voting, according to the interest held by them. This caused considerable surprise and discontent; but the deed requiring six shareholders to demand a poll, it was put to the vote, when eight or nine hands were held up in its favour.

Very considerable discussion followed, as to the policy of letting it go forth to the world, that they were a divided body; and Mr. Smith and Mr. Poynder having consulted together, agreed to withdraw the demand for a poll—Mr. Poynder stipulating, however, that it was not to be taken as a precedent, that the poll was not to be resorted to on future occasions. This liberal movement gave great satisfaction, and Mr. Coles Child's original motion was declared carried, without any stipulation as to proportion of annual profits to be reserved.

A vote of thanks was then proposed, seconded, and passed with acclamation, to Messrs. Smith and Poynder, for the very handsome manner in which they had conceded their own opinions, for the general interests of the company; and a vote of thanks having also passed to the chairman and board of directors, the meeting separated.

MINING COMPANY OF IRELAND.

The usual half-yearly meeting of shareholders was held at their offices, Lower Ormond-quay, Dublin, on Thursday, the 7th inst.,

JAMES DAWSON, Esq., in the chair.

R. PURDY, Esq. (the secretary), read the following report of the operations of the company during the past six months:—

REPORT.

In presenting to the proprietors a report on the company's affairs for the half year ended 30th Nov., your board regrets that the returns from the mines are not so advantageous to the company as they have been for some years past.

The principal deficiency in these returns is in that from the Knockmahon Mines, occasioned in a great degree by the continued refusal of the proprietor of Ballinasisla section of the mines, or his trustee, to enter into an equitable arrangement with regard to the exorbitant rent provided by an Act of the Irish Parliament, 10th George I., c. 5, say 1-10th of the gross produce, the lessee paying all expenses. For the particulars of this case, and a statement of the injurious effects upon the interest of landlord and tenant to be apprehended from it, you are referred to the board's reports for the half years ended 31st May and the 30th Nov., 1843, and 30th Nov., 1844.

In the past year the subject was again brought under the consideration of the landlord by letter—a copy of which, with the resulting correspondence, is open to inspection by shareholders. From the tenor of the reply to the letters of 24th and 25th April, received 2d June, hopes were entertained that favourable consideration would be given to the subject; therefore, not only were the searches continued upon the same extensive scale as heretofore—but in order to prevent derangement of the labour market on the eve of the expected extension of your works, food was provided and supplied to the men employed, at reduced prices, involving a sacrifice at the Knockmahon Mines alone, amounting to 400*l.* within the half-year.

It now appears, however, from the reply of the acting trustee of the estate, communicated on the 8th Oct., that the terms of the trust do not admit of the permanent amelioration sought for; and the tenant for life has not replied to a subsequent suggestion, that although the trustee declined to act in the matter, the proprietor for life had, no doubt, the power to make an equitable arrangement for his term; and from his silence it is inferred that he is not disposed to do so. Under these circumstances, the company's profit from the entire of the Knockmahon Mines in the past half-year being only 1154*l.* 2*s.* 4*d.* towards interest on upwards of 50,000*l.* expended in opening the mines and erecting machinery thereon, whilst the rent payable for Ballinasisla section of the mines alone amounts to 984*l.* 9*s.* 8*d.* as royalty on ores, under the extreme terms of the Act 10th George I., exclusive of 130*l.* for surface accommodation, your board proposes so to alter the scale of expenditure as to meet the circumstances; and also considers that it will become necessary, so far as the company is concerned, to leave the labour market free as regards supplies of food for the men employed—the more especially as the assessment for relief of the poor will necessarily form a heavy charge upon the company during the ensuing year.

From the numerous disappointments experienced by your board, in treating for leases of metalliferous mines, arising from the limited powers granted by the Act 10th George I., c. 5, to tenants for life, guardians of miners, and of lunatics and other corporations, and which occasioned the company's difficulty in the case adverted to, your board deemed it advisable to bring the subject under the consideration of Government by the following letter, addressed to the Chief Secretary to his Excellency the Lord Lieutenant:—

TO THE RIGHT HON. HENRY LABOUCHERE, M.P., &c.

SIR,—The board of directors of the Mining Company of Ireland, begging reference to the letters addressed to your predecessor, Lord Lincoln, dated 11th and 18th June, and his lordship's replies under the dates of 16th June and 3d inst. (in the Irish office), would respectfully solicit favourable consideration of the defective state of the law as regards the leasing powers of certain proprietors of mines in Ireland with the view to amendment thereof. The Acts by which the leasing powers are governed, are the 10th George I., c. 5, and 23d George II., c. 9 (Irish).

By the former powers were granted to tenants for life, corporations, &c., to grant leases of mines for 31 years at a rent of not less than 1-10th part of the gross produce, the tenant paying all costs attending the searches, and raising and dressing the ores for market; a rent so onerous (being more than double the rate payable for the rich mines of Cornwall), that many valuable mines have remained unwrought, to the great injury of the proprietors, as well as the labouring class.

The latter Act, as an amendment of the former, enables similar proprietors of coal mines to lease them for 41 years at any rent to be agreed for, not less than twopence per ton of coal to be raised.

To extend the benefits of the amendment to the proprietors of metalliferous mines, say the ores of copper, lead, tin, iron, zinc, &c., it would be necessary to provide by law that the proprietors may grant leases thereof at such rent as a solvent tenant would give for same without fine or other consideration, and subject to the other provisions of the Act 10th George I., c. 5., for protection of the interests of inheritors and remainders, thus establishing as a fair rent the improved value when leases shall be granted.

With the view of saving trouble in the consideration of this question, the board sends herewith a draft of clause for insertion in the bill before Parliament, for improving the relation between landlord and tenant in Ireland, or for separate enactment if such should be deemed advisable, and respectfully trusts that so desirable an object will be effected in such manner as will increase the national value of mineral property in Ireland, as an important source of employment for the labouring class.

I have the honour to be, Sir, &c.,

RICHARD PURDY, Secretary.

How far Government will interfere in obtaining amended legislation in this matter, your board is unable to state; but assurance has been given that the suggestion is receiving due consideration, and your board confidently trusts that a defect in the law, so clearly prejudicial to all parties in the state, will be remedied. No company will invest capital in opening mines in Ireland under agreements with tenants for life, so long as the law requires that royalty rent, considerably above the value, shall be provided in the lease, in order to render such lease valid; or that, on a change of proprietors, or on minors obtaining majority, the extreme maximum rent provided by the Act shall be chargeable, notwithstanding equitable agreements to the contrary.

The returns from the Slievardagh Collieries are more satisfactory; but the demand for culm has not been commensurate with the supply, nor with the extent of previous sales—a circumstance attributed to want of enterprise on the part of the farmers, usually the company's best customers, and which is supposed to be consequent on the failure of the potato crop in the past and preceding seasons; for it appears that the burning of lime has been suspended in several parts of the extensive district formerly supplied with culm from the company's collieries, and that the limestone quarries are not worked to the same extent as heretofore, in consequence of the reduced scale of demand for that article as manure. The stock of culm has, nevertheless, been allowed to accumulate to excess, rather than reduce more than is considered absolutely necessary the scale of the company's works under the circumstances in which the labouring class has been placed by the high price of food. The men have, however, been for some time limited to four days' work weekly; but in order to assist the men under the existing pressure, they have been supplied with Indian meal on the same terms as at the Knockmahon Mines, adding the increased cost of transit, without reference to the rapidly increasing price thereof in the market. Notwithstanding these unfavourable circumstances, the collieries have yielded fair profit upon the capital employed, and your board is of opinion that, whether the potato shall be again extensively cultivated as heretofore, or other crops shall be substituted, lime will continue to be the most valuable manure obtainable in the district—in which case a revival in the demand for culm will bring your valuable collieries into full operation with increased advantage, so soon as the prevailing panic amongst farmers shall subside.

Considerable progress has been made in sinking the engine-pits for working Earl's Hill Colliery, in the past half year. Lissacor Colliery level having been driven without intermission, has been extended 392 yards, supposed to be within 550 yards of the point at which the seam of coal there may be worked with profit. Glendalough or Luganure Lead Mines have not yielded profit in the past half year, the prospects are, however, sufficiently encouraging to induce expectations of more favourable returns; and with the view of prosecuting the searches with more advantage, your board have embraced a favourable opportunity for purchase of and laying down a railway in the deep levels of the mine, for which, including sleepers and a considerable quantity of timber, 260*l.*

has been paid. At Cairne and Ballyhland Lead Mines, the works have not been resumed for the reasons already stated, with the exception of dressing some halvans, a part of which has been sold. In Ballycorus Lead Mines, no improvement is observable, and the expense in searches has been restricted to the small amount set forth in the accounts. The Lead-Works at Ballycorus have yielded profit to some extent, although the scale of operations has necessarily been of limited extent, owing to the reduced amount of produce from the mines. There has been a reduction in the price of lead in the past half year amounting to 1*l.* per ton, and the present stock is calculated at the reduced rate. The company's claim on Lord Audley's estate has been reported by the master in the cause as the first charge on the estate, to the extent of 13,607*l.* 16s. 4d., on 1st June. Your stock of mineral produce is valued at 29,365*l.* 11s. 11d.; bills, cash, good debts, and mining materials not in use, 13,370*l.* 8s. 8d.; mines, arms, and mill-sites, 130,697*l.* 9s. 6d.; making the total assets, 184,272*l.* 17s. 8d., after deducting unclaimed dividends, rents, and accounts due by the company.

For the details of these items you are referred to the audited abstract of accounts presented herewith; and your board, considering that the floating capital of the company is barely sufficient for continuing the extensive operations in progress, with that degree of independence which alone admits of the advantageous direction of your affairs, and being, therefore, desirous not to encroach upon the requisite amount of capital, recommends that a dividend be now declared at the rate of 7 per cent. per annum for the half year ended. And in conclusion, your board cannot avoid adverting, with pleasure, to the large amount already paid to the proprietors in dividends; whilst the works and property of the company have been so greatly improved by the large outlay upon them, as to afford strong ground for expectation that, under such arrangements as your board may consider advisable, they will be made to produce a return in future that will be considered perfectly satisfactory.

Sir Robert Kane moved the adoption of the report and statement of accounts; and, in doing so, said it was impossible to avoid noticing the circumstances under which it came before the proprietary, and which, as he conceived, were very satisfactorily detailed in it—he alluded to the somewhat altered position of the company, compared with what it was at several of the preceding half-yearly meetings. The most important announcement they had was, that their dividend was to be reduced to nearly one-half of what they had received upon many previous occasions—that they should receive but 7 per cent. per annum, instead of 12½ per cent. Now that, as he had stated, was a most important matter; but it was unnecessary to assure the shareholders, that this diminution was not owing to any want of energy on the part of the directors, or any want of anxiety to carry on the works under their care with economy and due regard to the interests of the shareholders. The fact was, that the great change which had taken place was caused by circumstances over which they had no control—circumstances, some of which were beyond all human control, and others arising from the conduct of certain parties, who treated them in a manner which they did not deserve. He (Sir R. Kane) would shortly allude to the latter cause, which was so well set out in the report. It was a very remarkable circumstance, that the mining company stood in such a position, that they gave employment to upwards of 3000 persons in the county Waterford alone, and that they were supplying them with food under cost prices, independent of their wages, so as to enrail on themselves a loss of 400*l.* in six months; whilst the owner of the soil, who gave no employmen, and who supplied no cheap food, received no less a sum than 1050*l.* profit out of their works; so that he (the proprietor of the land) got all that was made by the company, whereas the company were obliged to bear all the losses. This occurred, partly owing to the law of mining property—and in order to remedy the evil, the directors had laid a statement of the case before the Government to obtain a modification of the law, which they soon hoped to have altered. The matter complained of arose from a want of power on the part of the proprietors to alter their tenures. With regard to the collieries, they were, he was happy to say, in a very different position; for, as it appeared by the report, they had realised a good profit, although not as large as what they had received in former years—and the slight diminution was fully accounted for by the state of the country. (Hear). They had a great stock of culm on hand, which would be sold to the farmers to burn lime for manure when the present panic ceased; as, owing to that circumstance, the farmers were not now burning lime as usual. It thus appeared that they had lost money by endeavouring to benefit the country—for they had not even diminished the number of workmen, and they had thrown an abundant supply of provisions into a district that required it, and thus prevented destitution existing, which would otherwise have been the case. All these matters tended to show a decline upon the apparent prosperity of the company, but he (Sir R. K.) believed it was only temporary—for he felt confident that the Government would interfere to protect them, if the landed proprietors did not act fairly; because he was sure it would not be tolerated, that a great company should be stopped in its labours, and made, in fact, the milch-cow of the landholder. In conclusion, he would move the adoption of the report.—Mr. Parker seconded the motion.

Mr. Gibson begged to say a few words. No doubt, the report, and the observations made that day, would have great weight in the country. He hoped that, notwithstanding the antagonism which appeared to exist between the company and the proprietors of the soil, that the latter would see it was their interest to let the company proceed, paying reasonable per centage. He, however, had not the least doubt that the directors did all in their power for the general benefit and prosperity of the comyany. He thought the directors had acted prudently and wisely in the course they had taken—(hear, hear)—and he coincided in all they had done regarding the distribution of provisions, and also in what they would do regarding the sustenance of the people. He would not now say anything on the report, but he thought it right to offer these few observations.

The report was then adopted unanimously.

Mr. Thomas Pim moved "that a dividend of 7 per cent. per annum shall be declared for the half year, to be payable on and after the 1st Feb. next."—Mr. Isaac English seconded the motion, which was also adopted

Thanks were then voted to the chairman and directors, when the meeting separated.

KILBRICKEN SILVER-LEAD MINING COMPANY.

The quarterly meeting of adventurers was held at the Grand Hotel, Covent-garden, on Thursday, the 7th inst.,

W. C. Evans, Esq., in the chair.

The minutes of the last meeting having been read,—the Chairman reported, that the first deposit on all the shares had been paid; and that Mr. H. Crockford had paid into the bankers of the company the sum of 1500*l.*—and that a new engine and boiler had been purchased for 900*l.*—also pumps, and other materials, in Cornwall, at very moderate prices.

A statement of accounts having been read,—it was moved by Mr. Forsyth, and seconded by Mr Monson, "That they be received and passed."—It was moved by Mr. F. Crockford, and seconded by Mr. Garner, "That Mr. Peter Cloves and Mr. Forsyth be appointed auditors to the company."

The following reports, received from the agent (Capt. J. Williams), were read:

Jan. 2.—Since our setting for the month of October last, we have cut down the flat-rod shaft for a new engine-shaft, 3½ fms. (to the rock), and walled it up to the surface. We have also laid a sett of trunks for washing slimes, which are now in operation; but, having had considerable frost and snow since they were laid, we have made but little progress in washing; we have now about 1 ton of silver-lead ore in a forward state from these slimes; we have a quantity of these slimes in the lents and slime pits, which will produce 4 to 5 tons of ore, that can be washed up for something less than half its value. We have also raised stone and sand sufficient for all the new erections (except the engine-house), which we have now commenced building. In the erection of our workshops, we shall deviate from our original plan, as by throwing the present pitman's house and material room into the present smithy, we can make them; we can also convert one of our old boiler houses into a carpenter's shop, by which arrangement, we can restrict the expense of these erections to within 100*l.* We have succeeded in getting the Board of Works to commence the new line of road from the mines to the port of Clon, for which we obtained a grant of 178*l.* in October last. I have surveyed and estimated the expense of the drainage of the bogs and lakes about the mine, which will cost 470*l.* I have had an interview with the lord's agent on the subject, and he has consented to have it done by the Board of Works, under the Drainage Act, which we shall now endeavour to get done as early as possible. Of our resuming the working of the mine, it would be difficult to say, as it will entirely depend upon the state of the weather; but, should it seem prudent for us to do so, we shall be anxious to begin in March, or as early in the spring as possible, so as to get our new machinery in readiness for the next ensuing winter.

Jan. 5.—Yours of yesterday is at hand. The expense of erecting the new engine-house will be about 200*l.* The new engine-shaft is 16 fms. deep, but will cost about 70*l.* to make it good to that level. Of the drainage of the land, I can give you no further information than that contained in my report sent you yesterday. We have done nothing at Oughaville, or elsewhere, nor should we be justified in speculating on these things out of our present capital. It is decided to use our two boilers, with the one at Greenfield, for the large engine. I have not an account of the materials purchased in Cornwall, but am expecting it daily.

On the motion of Mr. Forsyth, seconded by Mr. Straith, the thanks of the meeting were voted to the chairman.

ST. AUSTELL CONSOLS MINING COMPANY.

A special general meeting of adventurers was held, at the New Inn, Tywardreath, on Thursday, the 31st ult.

Capt. Davis, R.M., in the chair.

The accounts for the six months ending October were produced, showing—Balance from last account, 36*l.* 9s.; cost from May to October, 411*l.* 14s. 7d.—448*l.* 3s. 7d.—By deposit of 1*l.* per share, declared 23d June, 248*l.*; by sale of copper ores, 5th Nov., 88*l.* 5s. 3d.; miscellaneous, 12*l.* 17s. 2d.—leaving balance of 99*l.* 11s. 2d. against the company.—The accounts, having been examined, were allowed and passed—it being resolved, that, with a view to giving confidence to out-adventurers, a copy, in detail, should be forwarded to any shareholder, on his paying the necessary expense. A call of 1*l.* per share was made, and a resolution passed, that all shares on which calls shall remain unpaid on the 24th inst. shall be forfeited.

The following report from Capts. J. Sampson and N. Tredinnick was read to the meeting:—Since our report to you on the 23d of June last, we have driven on the Goffin lode about 30 fms.—the lode has continued to produce ore nearly all the distance, and from which we have saved about 3 tons., and it has maintained its promising appearance. We yesterday cut through a large cross-course, which is 3 fms. wide; but can say nothing more of the lode now, than that a large stream of water is bursting from it, which we consider a favourable indication. We have sunk a winze 7 fms. under the adit on Williams' lode, where we had such a promising branch, but could not satisfactorily prove it, the air being so bad that the men could not work; but as a new shaft is now holed from surface, we intend resuming our work here as soon as the water abates. We have driven the adit east to that part of the mine called Wheal Hawkins, 45 fms. since last report—sunk a shaft to the adit level, and commenced driving south to cut Wheal Hawkins' lode, which we hope to effect in about two months; from this shaft we have also commenced driving north, for the purpose of cutting Williams' lode—the ground at present is very favourable, and can be driven for 20s. per fm. The breakage in the old adit has been very troublesome and expensive, much more so than we anticipated in our last report. We expect that our next call will allow us to prove at the adit level the different objects for which this sett was first taken up, and also enable to determine the most eligible spot for the erection of a steam-engine of sufficient power to drain the mine, and which, from discoveries already made, we shall not hesitate to recommend. Our opinion of this mine continues equally as favourable, as to its being a good speculation, as at any former period. We have now about 6 tons of ore on the mine.

East Wheal Seton.—The two-monthly meeting of adventurers was held at Redruth, on Monday, the 4th inst., when the statement of accounts was presented. The following resolutions were moved, and unanimously passed:—That the accounts, showing a balance of 465*l.* 9s. 10d., including merchants' bills, having been examined, be allowed;—that the salary of Capt. Evans be raised to 8*l.* 8s. per month;—that the salary of J. Harris be raised 10s. per month;—that a call of 3*l.* per share be made, and immediately collected, for the purpose of meeting the balance, and to pay the labour cost for December and January.—The following report, from Capt. J. Evans, Jun., was read to the meeting:—Engine-shaft is down 8 fms. below the 24 fm. level from surface, on course of lode, worth 8*l.* per fm., giving 8*l.* for sinking 24 fms.; in the level west the lode is 2 ft. wide, and has a promising appearance; ditto east the lode is small and poor; in driving this level 6 fms. further we shall get under the ore ground driven through at the 17 fm. level west—we expect a tolerable lode at this level; we are driving west, the lode is worth 3*l.* per fm., our tributers are getting wages: shall sample on the 20th inst. about 250*l.* worth of copper ore, and expect the next two months to sell 200*l.* worth—the cost will be about 250*l.* I am glad to say, our prospects are improving.—[We learn, that the shareholders at the meeting expressed themselves highly satisfied with their prospects, and, especially, from the confidence in which their agent has given his opinion.]

Wheal Grace Consols.—At a general meeting of the adventurers, held at the Bedford Hotel, Tavistock, on Wednesday, December 30th, it was resolved, that the accounts for August, September, October, and November, having been examined and found correct, and showing a balance of 75*l.* 19s. 7d. against the adventurers, are hereby declared to be passed. Since last meeting, a steam-engine has been purchased, and is now in course of taking down for removal; the buildings for its erection are being proceeded with; and it is hoped that, by the end of March, everything will be in a complete working state. Pursuant to a resolution passed at a general meeting of adventurers, held February 10th, a call of 5s. per share was made, payable at the Tavistock Bank.

Wheal Trevenna.—A meeting of adventurers was held, at Liskeard, on Wednesday, the 6th inst., when the accounts, from September to November, were presented, examined, and passed. Mr. Dingle, of Darley, was appointed to survey any delapidations, and report thereon to the next meeting; the resignation of shares by Miss Hall was accepted, on her paying 1*l.* each; Mr. Simon Peter was directed to take any necessary steps for the recovery of arrears of calls. A call of 30s. per share was made, payable at the Devon and Cornwall Bank, to meet existing liabilities, and for the further prosecution of the mine—for which latter purpose, the agents were requested to purchase the necessary pumps, &c.—The following report from Capt. S. Bennett was read to the meeting:—Since our last meeting there has been but little work done on which to report; but that which has been done is of some importance. We first sunk some 4 or 5 fms. on a lode about 15 fms. to the north of Wheal Bank lode, where we found the underlie to be such that (if it continued in the same course) it would intersect the Wheal Bank lode about 30 fms. below the adit level, where we may reasonably expect a favourable change. The lode on which we sunk is in that place small, and chiefly of a flookan nature, with some soft spar, a little mundic, and occasional spots of copper ore. It would appear as though there had been some extensive workings on that lode in former times, but which, in my opinion, were undoubtedly for tin. We afterwards commenced sinking on a lode about 30 fms. to the north of the Wheal Robins lode, and about 100 fms. south of the Wheal Bank lode. At surface this lode was small, and not more than 4 or 5 in. wide, but had a somewhat promising character; and in the course of sinking it gradually widened to about 7 or 8 in., which is some 18 or 20 ft. from surface. It is composed of spar, peach, a beautiful gossan, with a quantity of arsenical mundic, some good spots of yellow copper ore, and some of the black oxide of copper mixed with the mundic and gossan. In the caples of the lode are some good stones and veins of tin, together with veins of quartz, and spots of copper ore; so that the whole size of the lode and capels, which contain metallic ore, is not less than 3 ft., and the underlay not more than 20 in. per fm. There is also in the fissures of the lode and capels a quantity of the carbonate of copper, or "greens," which clearly indicates the presence of copper and promises a productive lode. For the further prosecution of the mine, I would recommend the immediate purchase of pumps, to enable us to sink on the Wheal Bank lode 10 fms. deeper before we drive. I would also recommend, at the same time, that two or more men be put on this middle lode, which in a short time may be of vast importance to the shareholders.

CORNISH STEAM-ENGINES.

The number of pumping-engines reported for the month of Dec. is 24—the quantity of coals consumed being 1590 tons, lifting, in the aggregate, 15,000,000 tons of water 10 fathoms high—the average duty of the whole is, therefore, 54,000,000 lbs. lifted 1 foot high by the consumption of a bushel of coal.

Mines.	Engines.	Length of stroke	Load in pounds.	Load per sq. inch on pist.	Strokes per min.	Consump. of coal in bus.	Million lbs. lifted 1 foot by consump. of 1 bush. coal	Average quantity of water per min.
Wh. Prosper..	Roberts's 70-in.	9·75	83,094	16·8	4·1	1944	55.1	431
Great Work ..	Leeds's 60-in.	9·0	47,020	12·9	7·2	1830	54·4	173
Carn Brea ..	—— 76-in.	9·0	78,452	13·4	3·9	1385	64·1	385
Poldice	Sims's 85-in.	10·0	82,040	10·1	5·4	2080	56.3	383
Ting-Tang	Sims's 60,100 in. combined	9·0	57,892	19·3	4·0	1512	56·4	258
United Mines	Taylor's 85-in.	11·0	97,108	15·5	6:1	2688	90·3	
Ditto	Eldon's 30-inch	9·0	13,631	16·0	9·0	514	72·7	1451
Ditto	Loam's 85-inch	10·0	89,220	11·8	5·1	2367	58·5	
Ditto	Hocking's 85-in	10·0	99,243	14·8	7·1	4042	59·7	
United Hills..	Williams's 80in.	10·0	73,988	11·7	6·7	2904	56·0	465
East Wh. Rose	Penrose's 70 in.	10·0	49,100	11·4	3·4	1012	60·7	604
Ditto	Michell's 70 in.	10·0	54,250	12·6	4·3	1350	63·0	

Fire at the United Mines.—On Friday evening last, the 8th inst., about 8 o'clock, the Poldroy engine-house was discovered to be on fire, and no energy on the part of the agents or men could allay the fury of the conflagration, until the whole of the wood work was destroyed. At present, it is impossible to say what amount of damage has been done to the machinery, but the extent of the fire may be imagined when we state that the cast-iron bob was broken by the intense heat. It is considered that it will occupy 10 days or a fortnight in setting the engine to work again, and we fear the labour of the miners will be suspended for at least twice that period, which will be occupied in forking the water—a calamity that will be seriously felt by the families of the workmen, especially at this season of the year, and with the present high price of provisions. —*Penzance Gazette.*

Colliers' Strike.—A collier, who writes from Woodside, has sent us a communication in reference to the letter of a "Colliery Bailiff," (see *Mining Journal* of last week), from a correspondent at West Bromwich, questioning the accuracy of some of the statements it contained. He says—"The writer points out clearly some of the evils arising from these turn-outs; but he has deviated from truth in saying, that the pikemen are making three 5s. stints in one day. I myself have been a miner upwards of 30 years, and have seen many able-bodied men who could not perform one of these stints in 12 hours, but this is not always the case. Speaking of the bandsmen, he says, if these work by the day, their wages is 5s. 6d., and, if by the ton, they are getting 7s. or 8s. per day. With respect to this, two men generally take the band; these two sometimes get a little more than 5s. 6d., but the other part of the band get but the regular day's wages.—*Birmingham Journal.*

VENTILATION OF COAL MINES.

In our notice of a work on the above important subject, by Mr. B. Gibbons, of Shut-end House, near Dudley, in the *Mining Journal* of Saturday last, we find we have inadvertently been led into some few errors, in our necessarily hasty review—the description appearing to mix up the old system of working in the 30 ft. coal, with Mr. Gibbons's improvements, and thus not being clearly descriptive of the latter. Anxious that every information in our columns, particularly on a subject so fraught with interest to the great cause of humanity, as the ventilation of coal mines, should be correct, we shall now give a concise description of the plan so successfully adopted by Mr. Gibbons, without reference to the old and dangerous systems of getting the 10 yard coal of South Staffordshire.

Supposing a colliery about to be opened where the depth of coal is 140 yards, instead of two pits as usual, the author sinks one only; but on one side is cut an oblong channel of 4 or 6 superficial feet, as may be required, for an air chimney—this is done simultaneously with the sinking of the shaft, as one man can keep pace with the sinkers therein. This air chimney is bricked up with the shaft, and the circular brickwork of the latter completely divides it from the shaft and forms a separate chamber. On reaching the bottom of the 30 ft. coal, a gate-road is driven from the shaft on the floor, and an air head 28 ft. above, or 2 ft. from the top of the coal, from the air chimney. These levels are then carried on parallel to the extent it is designed to get the coal, and then the gate-road is turned at a right angle to begin a side of work, which is generally from 90 to 110 yards by 50 yards; spouts are then to be made from the gate-road upwards into the air head at every 15 yards; but as the spouts, when carried up a few feet, become so full of gas that the men cannot work in them, it is necessary to bore a hole first, 4 in. in diameter, which is only a few hour's work; and as soon as it has pierced the air head, a stream of air will rush through and keep the spout perfectly pure, and the men can work with candles in perfect safety. The excavation is now commenced and continued; and by the time the lower measures of the coal are removed, the excellence of the plan becomes apparent—the gate-road being at the bottom, and the airway at the top of the coal, and the whole being scoured by a strong current of air, the coal is rapidly drained of gas, which, instead of accumulating on the roof, is carried off to the open air. Under the usual imperfect mode of ventilation, no determinate power compels the air to travel in *one* and the *same* direction; but, for perfect ventilation, it is necessary that there should be a permanent and abundant current of air created by natural causes, and one which shall never fail; to effect this, the *ascending* column must be rendered specifically lighter than the descending one—and this is accomplished by giving to the *ascending* column a length and height considerably exceeding the descending one. To effect this, a chimney, called the ventilating chimney, is erected from 60 to 90 ft. high, connected to the air chimney already in communication with the air head; the apparatus is now complete, and a *self-sustaining* action that will know no pause, is established and secured; the air descends the shaft, traverses the gate-road, and sweeps round the workings, returns along the air head, up the air chimney, and, passing through the ventilating chimney to the upper regions of the atmosphere, carries with it the noxious gases of the mine—ventilation is thus secured by an unerring law of Nature, and one which will never fail. If necessary, the chimney can be carried up 20 or 30 ft. higher, which will greatly increase the draught, and it will be often found practicable to employ the engine chimney, if 5 ft. square within; it may then be divided by a 4-in. wall, 30 ft. high, and one division will serve the boiler furnace, and the other ventilate the mine, and, being always in a heated state, acts most powerfully and efficiently; but as the engine chimney will require repairs, and thus the ventilation might be deranged, Mr. Gibbons's objection to any breach of the system is such, that he recommends a separate chimney as preferable. He strongly deprecates any interference by Government, as it would be a constant source of vexation and interruption in the working of the mines. Here is a plan which has been successful in every case where it has been applied, and we cannot see why it would no do for the Newcastle coal pits; and, with proper modifications, why coal seams of 5, 6, or 7 ft. in thickness should not be worked by it with as much facility as the 10 yard coal of Staffordshire.

We are satisfied that Mr. Gibbons has done much for the working collier of every district, by the publication of this little work, and it now only requires a firm determination on the part of coalowners, to compel the adoption of the system; the prejudices of the workmen, and the ill-feeling of agents, who cannot bear the thought of adopting any plans but their own, however good, will then disappear like chaff before the wind; a new era in coal mining will be opened before us, and our coal districts be free from those appalling tragedies, statements of which so often disgrace this age of science and advancement.

The North Wales Silver-Lead, Copper, and Gold Mining Company.—It is generally known, and admitted by persons conversant with the subject, that many parts of the principality, particularly North Wales, contain certain indications of possessing vast mineral wealth; and which, nevertheless, have been either only partially, or not at all, explored. Great wealth has, for centuries past, been obtained by individuals from the rich silver-lead ores of this mountainous district, and the mines now working are paying well to the adventurers. Still there is a wide field for enterprising operations; and there is little doubt, that as the country is opened up by railroads, and greater facilities thus afforded for investigation, as well as for the transit of heavy produce, that the mining capabilities of the district will be more extensively brought to light. The above company is formed for working some mineral property in the neighbourhood of Dolgelly, Merionethshire, extending under 1000 acres, held on lease for terms from 21 to 23 years. The mines are the Iyddynyglwadis, Dolfrwynog, Vigra, and Clogau. The first of these is stated to contain silver-lead and copper ores of very rich quality, and according to assays by Messrs. Johnson and Cock, Johnson and Sons, Mitchell and Field, Ruel, and others, produces from 40 to 70 per cent. of lead, and some specimens as high as 131 ozs. of silver; while one specimen of copper ore contained 165 lbs. of pure copper, and 14 ozs. of fine gold, to the ton of ore. The second produces malachite in small crystals, which gives 58 per cent. of copper; but in the large way, as two-thirds of the stuff stamped will be the attached rock, may be estimated at 20 per cent. The flookan contains 10 per cent. of metallic copper; and a gossan from this mine gives 11 ozs. 10 dwts. of silver, and 3 dwts. 6 grs. of fine gold, to the ton. The Clogau and Vigra Mines produce copper ores, varying from 5½ to 20½ per cent. for copper, and some rich silver lead ores. These mines are situated five miles from the port of Barmouth, with a navigable river running therefrom to the mines; and thus they are well situated with regard to carriage of the ores, materials, machinery, &c. There is also an abundant supply of water-power for stamping, &c., and the mines can be unwatered by adits, thus avoiding the expense of steam-power. The promoters of this company do not pretend that gold will be found in sufficient abundance to pay for working alone; still, as it is evident it does exist in the strata, and that, in some instances, to a very rich extent, it may be expected materially to augment the profits on the workings under their primary and principal object—namely, copper and silver-lead ores. The capital of the company is to be 125,000*l.*, in 12,500 shares of 10*l.* each, with a deposit of 50s. per share; and it is not expected that more than 5*l.* per share in all will be required. Capt. Matthew Francis and Capt. Kitto have reported very favourably of these mines; and the last reports on each, by Mr. W. Williams, mineral surveyor, will be found in our mining correspondence.

Mining in Southern Africa.—Two mining companies have been formed at the Cape of Good Hope—one for working the Maitland Lead and Copper Mines, situate 20 miles from Port Elizabeth; and the other, the South African Mining Company, for working the copper district near the Orange River. The Maitland Mining Company in their prospectus state, that the estate contains 6000 acres, and the purchase money only 1600*l.*—that the road to Port Elizabeth is nearly level—that extensive veins, cropping out in various spots on the surface, indicate rich beds of metal beneath—and that geologists have expressed their most favourable opinion of the great extent of the metalliferous limestone formation. The assays of the lead ore gave 60 per cent. of lead, and 26½ ozs. of silver in a ton of lead; and the copper yielded 1 per cent. higher than the average of the ores from the mines of Fahlun, in Switzerland. There is abundant fuel and lime on the spot for smelting, and two streams of excellent water unite near the mine. The capital is fixed at 10,000*l.*, in 200 shares of 50*l.* each; and 5000*l.* it is expected will enable the committee to bring the mines into profitable working. The prospectus of the South African Company states, that, so far back as the year 1790, the attention of the Dutch Government was called to the existence of valuable copper mines, yielding abundantly; and that, in 1791, an expedition set out to explore them,

and returned in 1792, with specimens, from which a piece of ordnance was cast. Since then the affair has lain dormant; but finding that some foreigners were endeavouring to get possession, an examination has recently taken place, and the result is, that in 28° 40′ south latitude, and 17° 8′ east longitude, there is a mountain of quartz, on the surface of which the earth and stones give evidence of the presence of oxide of copper; and on penetrating about 2 ft., the interstices between the strata, which lie nearly perpendicular, are full of rich ore, yielding from 28 to 65 of pure copper: a river, from 20 to 30 yards wide, flows at the foot of the mountain, on which the ore could be conveyed to the Orange River in lighters. Other mines in the locality are also proposed to be worked; but, as this is the easiest worked, it is taken first. The working of these mines will give employment to numbers of Hottentots, who are simple and unoffending, and, from being educated by the missionaries, know the value of wages and employment.

MINERALOGY AND GEOLOGY.

Mineralogy, geology, and mining may be said to form an important branch in the profession of a civil engineer. Without some knowledge of these, the engineer will, in many cases, find himself unable to carry on his operations with that degree of certainty and economy, which is necessary to ensure success; and, independently of their value in this respect, there are few departments of knowledge which have contributed more to the advancement, comfort, and civilization of mankind; whilst on the other hand, no class has contributed more to the advancement of them than the civil engineer—so that each department is essentially allied to and dependent upon the other. Geology enables the engineer to obtain a proper knowledge of the various strata through which he has to carry his operations; if for a cutting or embankment of a railway, it is essential to know the slopes at which the earth or rock will stand, the value and applicability of the materials excavated for his bridges, culverts, and viaducts, and their capacity for water, &c., in order to form a correct estimate for working through them, whether for his cuttings or his tunnels. If for a canal, the same will apply, with the addition of the knowledge of the sources from whence his supply of water can be obtained: this latter will also apply to water-works, in which the knowledge of the various qualities of water applicable to the economy of mankind is so essential. In the construction and maintenance of harbours, it is most important to have a thorough knowledge of the geological strata, and of the nature of the coasts where the harbour is to be situated, in order to render it easily accessible to vessels, whether for commerce or refuge, for its construction in the most economical manner, or for its maintenance, in order that the alluvial matter held in mechanical suspension by the adjacent waters shall not fill it up when made. In the management and improvement of rivers for drainage and navigation, in order that they may carry off the superfluous waters from the low lands and marshes, and at the same time maintain the channels in the most efficient state for navigation. In the formation of embankments against the ocean, in order that Nature herself may be rendered subservient, as far as is practicable, in affording the requisite protection; in these, as in the operations of smelting the minerals of the precious ores the more useful metals, geology or mineralogy are of essential service to the engineer, and deserve his peculiar attention.

Mining appears to have been known and practised in Great Britain from the earliest periods of our history, for the Carthagenians are said to have conveyed tin to Tyre, from Cornwall; but in those early days the operations must have been rude, and merely confined to the surface. This invaluable art made little progress until the knowledge of chemistry, and the invention of machinery, enabled mankind to extract from the bowels of the earth Nature's rich treasures, to investigate their different properties, and to apply them to the purposes of life; the steam-engine, which enabled the miner to extract the water, and enlarge the field of his operations, has been of invaluable service when the ore was raised from the mine, as also aiding in its reduction and the extraction of the metal in its most refined state. Some of the Cornish mines have been extended to a depth of more than 220 fms. below the surface. As regards coal-mines, they also have been worked to an extraordinary extent, as in the case of the Cumberland coal-fields, which have been wrought above a mile beneath the sea. The total quantity brought to the surface and consumed annually amounts to between 30,000,000 and 40,000,000 of tons. Without the steam-engine these operations would be entirely paralysed, and must cease. The total annual value of the British mineral produce is said to amount to about 26,000,000*l.* In this valuable department we are much indebted to the establishment of the Museum of Economic Geology, which will be the means of extending the knowledge and use of minerals, as well as the best mode of obtaining them. Neither must we forget the valuable services of Sir H. De la Beche, Murchison, Sedgewick, Greenough, Buckland, Horner, Lyell, John Taylor, Griffiths, Buddle, Sopwith, Philips, Wood, Atkinson, Bald, and others, who have contributed so largely to the advancement of this important branch of science.

Connected with mining may be mentioned the important subject of ventilation, the value of which is now so universally appreciated, not only for mines but for public and dwelling-houses. The art consists in conveying volumes of fresh air through apartments, so that the air shall be always as nearly as practicable in the proper state for respiration; but in effecting this, it is desirable that the temperature shall not be reduced too low, otherwise inconvenience may be produced in other respects; whilst ventilation, therefore, is of great importance, the artificial warming of apartments is of equal consequence, and to combine both effectually is the great desideratum.

Heat is the great medium for producing circulation, as in the example of collieries and mines, and on extraordinary occasions mechanical power may be applied. The common fire-place is the most wasteful of fuel, but possesses many advantages; and, although the stove may produce a more equable temperature, a proper combination of both seems best adapted to unite the advantage of a thorough circulation of air with the required degree of temperature; warm water and steam conveyed through pipes have been employed in many cases; those systems are, however, the best whereby a large body of air is raised to about 100° by passing between cases filled with hot water, and is enabled to flow freely into the apartments, expelling at the same time a corresponding bulk of vitiated air; thus rendering ventilation an integral portion of the system of warming; by such a plan, warm water may also be supplied to any part of the building for domestic purposes. When stoves are used, they should be upon the principle of slow combustion, and be so contrived as to avoid producing any disagreeable odour; for this reason porcelain is much employed, and it is essential to have a thorough circulation of pure air where stoves are employed. Upon this important subject, much information has been elicited by the late Parliamentary reports, and by the labours of Sylvester, Tredgold, Arnott, Reid, Hood, Price, C. Manby, Perkins, Haden, Stephenson, and others.—*Sir J. Rennie's Address.*

RAILWAY TRAFFIC RETURNS.

From these returns, it will be seen, that the amount of traffic for the last week, on nearly 2730 miles of railway, was 134,816*l.*, thus accounted for:—71,873*l.* for the conveyance of passengers only, 33,441*l.* for the carriage of goods, and a remainder of 30,502*l.* for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 16,998*l.*

Name of Railway.	Lgth. Rway.	Present actual cost.	Last Div.	Traffic Returns. 1847	1846
Arbroath and Forfar	15	£142,900	3p.c.	£ 190 10 2½	£ 159
Chester and Birkenhead	15	658,253	2½	577 18 3	544
Dublin and Drogheda	35	699,975	3½	618 0 1	585
Dublin and Kingstown	6	349,736	9	588 7 10	816
Dundee and Arbroath	17	156,324	6	278 0 10½	300
Durham and Sunderland	19	302,118	2	—	588
E. Counties & North. & East.	161	4,746,113	6½	9284 9 1	6547
Eastern Union	—	—	—	515 16 0	—
Edinburgh and Glasgow	46	2,112,136	6	3363 19 2	2557
Glasgow, Paisley, and Ayr	53	1,301,381	7	2125 11 10	1892
Glasgow, Paisley, & Greenock	23	829,427	2	890 17 7	702
Gravesend and Rochester	7	82,826	—	—	124
Great Western	241	8,685,605	6	15177 17 9	15328
Hartlepool	8	—	—	—	1292
London and North Western	440½	16,327,526	10	34026 19 3	40099
London and Blackwall	4	1,081,273	1½	634 1 5	705
London & Brighton & South Coast	113	4,670,721	5	4995 18 5	3203
London and South-Western	106	3,648,547	9	5407 19 2	5119
Manchester & Leeds	117	4,636,586	7	7718 15 6	5541
Manchester, Bolton, & Bury	10	942,725	5½	—	—
Midland Company	331	8,831,193	7	15832 0 8	13256
Newcastle and Carlisle	65	1,137,383	5	2032 6 5	4617
Norfolk	70½	985,080	6	1316 9 10	1187
North British	72	1,461,195	—	1195 6 2	—
Preston and Wyre	29	432,014	2½	560 11 5	423
Sheffield and Manchester	49	1,533,331	5	—	1468
South Devon	15	776,976	—	418 8 11	—
South-Eastern and Dover	140	6,613,535	3½	5985 6 11	5120
Taff Vale	30	690,229	6	1322 4 1	1139
Ulster	25	358,353	5½	700 0 0	642
York and North Midland	162	2,092,979	10	4774 5 2½	4017
Northern of France	260	—	4	8345 0 0	—
Orleans and Bordeaux	72	520,040	4	2205 0 0	—
Paris and Orleans	62	2,082,916	9½	2116 0 0	5020
Paris and Rouen	85	2,082,916	8	5856 0 0	4642

GROSS RECEIPTS OF THE FRENCH RAILWAYS IN 1846.

Line.	Length, kilo.	Capital.	Opened.	1846.	1845.	Increase.
Orleans et Corbeil	132	50,000,000	1843	9,277,805	7,666,331	1,611,474
Rouen	137	50,000,000	1843	8,822,453	7,338,155	984,298
Strasbourg	140	45,000,000	1841	2,403,599	2,252,553	151,446
St. Germain	20	16,000,000	1837	1,263,942	1,204,153	61,089
Versailles (rt. bank of the Seine)	19	18,000,000	1839	1,471,862	1,478,491	—
Versailles (left bank)	17	16,000,000	1840	862,236	794,013	8,822
Totals			Frs.	23,902,464	22,233,964	2,867,119

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

Bank Stock, 7 per Cent., 206½
3 per Cent. Reduced Ann., 93¼
3 per Cent. Consols Ann., 92⅞
3 per Cent. Annuities, —
3½ per Cent. Ann., 94⅛
Long Annuities, 9⅝
India Stock, 10½ per Cent., 253½ 4
3 per Cent. Consols for Acc., 93⅛ ⅜
Exchequer Bills, 1000*l.*, 5 9 5 pm.

Belgian Bonds, 4½ per Cent., 95½
Dutch, 2½ per Cent., 56⅛ ⅛
Brazilian, 5 per Cents., —
Chilian, 6 per Cents., 94⅛
Mexican, 5 per Cents., 23½
Spanish, 5 per Cents., 25½
Ditto Deferred, 17
Portuguese, 4 per Cents., 36
Russian, 5 per Cents., 111

MINES.—The transactions in this market since our last have been of a very limited character. During the early part of the week, very few (if any) shares changed hands; but within the last three days some business has been done, and the general appearance of the market is by far more satisfactory. Many are the causes to which this depression is attributed; but we should consider it arose from the present state of monetary affairs. The improvement in the Kirkcudbrightshire Company's mines have created a little demand, in which a few shares have been transacted—but at rather lower figures than quoted. Some Holmbush shares have also been done. Trehanes and Great Wheal Michells have been purchased at less figures than former quotations. Wheal Andertons have been eagerly sought for, varying in price—but very few have changed hands here, and that at the minimum price. The low price at which South Tamar shares have laid on the market, have produced buyers at those quotations, which, having been purchased for a rise, most likely will create buyers at a better figure. Treleighs, Stray Park, Callington, Trelawney, Fortescues, West Wheal Maria, Treviskey and Barrier, and Barristown, have also been done. In Foreign Mines a little has been done in Bolanos, St. John del Rey, and Copiapos, and still buyers in Altens and del Monte loan notes.

RAILWAYS.—In the early part of the week, the share market was anything but active, and in many cases prices receded: by Wednesday the downward tendency was yet more marked, and continued without intermission to the close of the week. Perhaps, the only exception to this sweeping depression has been the Manchester and Leeds—the steady and somewhat rapid increase of traffic having caused to support a good figure, in proportion higher than any other in the market—the strong disposition to sell having caused a depreciation in almost every other description of railway stock. Thursday was settling day, which passed over without any occurrence worthy of notice.

MEETINGS.—*South Devon:* to obtain the consent of the company to the various projects to be applied for in the ensuing session of Parliament; Mr. Samuda expects to make the first experiment on the atmospheric tube in the course of a month.—*London and Blackwall:* a meeting got up by certain discontented shareholders to inquire into the conduct of the directors; a motion was, however, carried, expressive of the full confidence of the shareholders in them.—*Eastern Union and Hadleigh Junction:* first meeting; it was agreed to sell the line to the Eastern Union Co.; the receipts had been 18,139*l.* 7s. 10d., and expenditure, 6676*l.* 17s. 4d.: leaving balance of 11,462*l.* 10s. 6d.—*Marseilles and Toulon:* resolution passed, that it was expedient to abandon the scheme, and that the directors be applied to, to return the deposits.—*Exeter and Crediton:* a meeting to obtain the consent of the shareholders to leasing the line to the Bristol and Exeter Company; for the motion, 652; against it, 1541.—*Tenby, Saundersfoot, and South Wales Railway and Pier:* the first ordinary meeting of this company under their Act was held yesterday, at their offices, Bridge-street, Blackfriars, when the report of the provisional committee was unanimously adopted. Sir R. R. Phillips was elected chairman of the directors, and Mr. Barlow, jun., secretary of the company. As soon as the season opens, the works will be commenced, and the dividend to be paid on the capital subscribed is to be 5 per cent.

The new Standing Orders Committee met yesterday morning, for the first time, in rooms Nos. 22 and 23. There are petitions for 490 projects, 337 of which are for railways. The usual formal proofs have been put in for the following, but none have yet advanced a stage—namely:—Glasgow, Paisley, Kilmarnock, and Ayr; for No. 1, Glasgow and Belfast Union; No. 2, Improvement; and No. 3, Ayrshire and Bridge of Weir, South Eastern Railway, Mid Kent and Direct Tonbridge, and Glasgow, Dumfries, and Carlisle Railway.

At Messrs. Lamond's sales, on Tuesday, like the market out of doors, the business done at the commencement of the week was very flat; notwithstanding which, that which was done obtained previous prices. On Friday, there was a still more marked depreciation; prices were decidedly lower, and buyers did not come forward so readily as usual—this may be attributed to this sale taking place so immediately after the settling.

On the London New Stock and Share Exchange, Old Broad-street, a good deal of business was done in the early part of the week. Birmingham and Oxford, and the East Indian lines, were more particularly inquired after. The effect of the banks raising the rate of interest was also felt here, by the flatness which subsequently followed. Several of the new conveyance companies were bearing about ½*l.* pm.

LEEDS, FRIDAY.—We have little of importance to note in our market during the past week. The general tendency of prices has been downwards, though the small quantity of stock offering prevents any very marked decline. Buckinghams and Great Northerns have improved, and are almost the only stocks for which an active demand exists to-day.

HULL, FRIDAY.—The amount of business throughout the week has been slight, and prices without material alteration either way.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Jan. 9, was 16,759; amount of money, £69 16s. 7d.

NEW SHARE & MONEY MARKET, ROYAL EXCHANGE.

ADVANTAGES.

1. To facilitate, more beneficially to the public, the *bonâ fide* sale and transfer of shares in public companies and Government Securities.
2. To effect a saving to the buyer and seller.
3. To enable the public, under certain regulations, to effect sales and purchases themselves.
4. To establish a register of all transactions. 36

EXPLANATION.

Scrip and share certificates to be offered for sale must be sent to the Royal Exchange Register-office, and a market price fixed (*i. e.*, between the extreme quotations of the day). A list of such shares, with the price attached, will then appear in the share-lists of the New Share and Money Market, which are distributed throughout England, Ireland, and Scotland, &c., which may be had on application and return of post.

The Stock Exchange list gives only the jobbers' prices of yesterday. The list of this market gives the exact price at which shares may be bought or sold each day, and will arrive within 200 miles of London by 10 o'clock in the morning on the very day of publication.

A similar list will be publicly exhibited at the Royal Exchange daily, and at the Register-office, facing Cornhill. Parties in want of shares not comprised in those offered for sale must state the particulars of the shares they require, and the price they will give, and upon giving a satisfactory reference in London, such shares will be included in a list of shares wanted, which will appear in the like public manner, giving information to the advantage of those who may wish to sell; no charge whatever being made for the registration of such "wants" unless a sale or purchase be effected.

The advantages to the public are obvious, for the buyer and seller will, by this means, effect their mutual objects, and save "the turn of the market," which is usually from 2s. 6d. to 20s. per share in scrip, and from £1 to £5 per share in the established securities. They will also effect a further saving by only one party having to pay in each transaction, instead of two as heretofore.

By thus throwing open the money market, the public will be enabled to purchase from the actual owner, and will no longer be compelled to submit to the loss of buying at the highest price and selling at the lowest, the consequence of four parties being employed between the buyer and the seller. For example:—A wants to sell, and B wants to buy, 20 shares in the Manchester and Leeds Railway, which are at 23 to 28 premium (*vide* the *Times*, September 22): A applies to his broker (1), who goes to a jobber (2), and the sale is effected at 23 premium, the lowest price quoted. B, who wants to buy, applies also to his broker (3), who goes to a jobber (4), and the purchase is made at 28 premium or the highest price quoted. Thus, four parties interpose, and in the transfer of only 20 shares £100 are wholly lost to the buyer and seller; whereas if they could have publicly registered their wants, and thus made them known to each other, each party would save £50.

Parties in the country will possess the facility of making purchases or sales at a price that is fixed and certain, without loss or inconvenience. An open market must offer greater advantages than a market wherein the public are not permitted to enter, and where shares are offered to an individual jobber in the most private manner, and where too frequently it is asserted "no buyer," or in other words, "no market," is to be found, or where an enormous sacrifice is the consequence of "forcing" a sale.

The securities offered in the New Share and Money Market will comprise:—Shares in all railways, joint-stock banks, fire and life associations, mining, gas, and water companies, and an infinite variety of others, and Government securities, British and foreign.

With a view to protect the public against fraud, all scrip shares deposited at the Register-office will be referred to the offices of the companies whence they were issued.

Several thousand shares in the principal railways, &c., are now on sale at medium prices, which the public can purchase without paying commission.

Several thousand shares also wanted, which the public can supply at the prices marked without paying commission.

Advices of sales or purchases will be forwarded, and proceeds disposed of according to instructions.—Notices of shares wanted, or of shares for sale, must be sent to Transfer-office, 5, Royal Exchange, London. STEVENS, HANSARD, & Co.

FRIGHTFUL ACCIDENT AT AN IRON-FOUNDRY, LAST NIGHT.—As a number of men were engaged, at the works of Messrs. Ainger and Co., Blackfriars, casting a heavy piece of metal, and had just succeeded in filling a pan attached to a crane with molten iron, the ladle tipped over, scattering about 70 cwts. of metal over the foundry, running among the men, and firing portions of the building.—The fire was extinguished by the timely arrival of fire-engines—when a dreadful sight presented itself: G. Richardson, T. Hobby, and M. Ryan, were discovered dreadfully injured, and were removed to the hospital, with little hopes of recovery; the children of Mr. Billinghurst, one of the partners, were also injured.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1024	Alfred Consols	4	60
225	Andrew and Nangiles	28	30
1000	Barristown	4	25
4000	Bedford	2	3½
128	Beaure Lead Mine	14	30
320	Birch Tor Tin Mine	41½	44½
8000	Blaenavon	50	40
100	Botallack	175	300
120	Brewer	—	5
10080	British Iron, New, regis.	10	19
—	Ditto ditto, scrip	10	19
128	Budnick Consols	52½	45
100	Bwlch Cwmerfin	20	—
1000	Callington	19	25
256	Caradon Consols	45	15
256	Caradon Copper Mine	9½	1
256	Caradon Mines	15	20
256	Caradon United	24	10
256	Carsdon Wh. Hooper	12	7
1000	Carn Brea	15	100
114	Charlestown	—	150
166	Cleveland	9	8
1960	Combmartin	5½	4½
1060	Comblawn	¼	2
128	Comfort	—	40
5000	Con. Tretoil Mining Ass.	5	⅛
128	Condurrow	36	55
2560	Cook's Kitchen	—	4
1000	Copper Bottom	1	5
1024	Cosheen	4½	30
240	Craddock Moor	15½	20
128	Creeg Brawa	120	300
500	Cubert Mine	12	27½
7100	Derwent	8½	5
1024	Devon & Courtney Con.	5	5
1000	Dhurode	2	5
186	Dolcoath	—	30
10000	Durham County Coal	45	9
256	East Alvenney	3	10
112	East Caradon	40	40
2048	East Crowndale	3½	1½
512	East Combe Silver-Lead	6½	30
128	East Pool	5	14
100	East Relistian	15	17
9000	East Tamar Consols	1⅝	2⅝
—	East Wheal Albert	1	3
94	East Wheal Crofty	—	310
256	East Wheal Fortune	1½	3
256	East Wheal Kitty	½	1
128	East Wheal Rose	50	1200
123	East Wheal Seton	9	22
512	Fowey Consols	—	40
20000	Galvanised Iron Co.	10	9½
10000	Gen. Mining Co. for Irel.	½	¼
1000	Godolphin	—	—
256	Gonamena	21	70
128	Gover	23	200
2444	Grambler & St. Aubyn	—	40
100	Great Consols	1000	400
256	Great Callestock Moors	11½	12
2560	Great Michell Consols	2	3½
256	Great Rosngga Moor	2	4
512	Gt. Wh. Rough Torr Con.	2	25
100	Grogwinion	5	—
1000	Gunnis Lake	1½	3
256	Gwinear Consols	5	5
1000	Hanson	14	3
1000	Harrowbarrow Old Mine	5½	2½
1000	Harrowbarrow Consols	2	¼
800	Hawkmoor	3	2
6000	Heignston Down Con.	½	2½
256	Herodsfoot	14	5
10000	Hibernian	12½	1
—	Hobb's Hill	4	3
1000	Holmbush	18	18
256	Ivy Tor	1½	2½
827	Kirkcudbrightshire	4½	5½
2048	Lamberooe Wh. Maria	9	8
2048	Lanivet Consols	4	2
200	Larkholes	1	3
160	Levant	—	90
1000	Lewis	15	11
1280	Llancynfelin	6	10
256	Lostwithiel Consols	6	8
128	Ludcott	3	3
4000	Marke Valley	10	3½
5000	Mendip Hills	1½	1
20080	Mining Co. of Ireland	7	8½
152	Nanterrow Consols	24½	7
128	North Fowey Consols	20	22
100	North Pool	37	80
70	North Roskear	10½	300
256	North Treburget	4	5
100	North United	41	30
256	North Wh. Leisure	1½	4
128	North Wh. Providence	2½	7
256	North Wheal Rose	29½	13
15000	Northern Coal Co.	23	2
600	Old Delabole Slate Co.	25	45
128	Par Consols	—	900
256	Pembroke	1	2½
256	Penhallow Moor	15	4
6000	Pennant	1	1½
100	Penrhiw	30	65
128	Pen-y-Cwn Mine	50	55
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9½	45
512	Plymouth Wh. Yeoland	2½	5½–6
2048	Prince Edward	1½	1½
256	Redruth Consols	3	14
10000	Rhymney Iron	50	30
256	Rose Consols	10	19½
1000	Rosewall Hill	1	5
—	Shotts Iron Company	50	70
2500	Silver Valley	4	3
256	Sourton Consols	3½	3
128	South Caradon	10	400
2000	South Dolcoath	2	—
256	Sth. Friendsh. Wh. Ann	14	14
200	South Harvannah	23	20
9000	South Tamar	⅛	⅛
194	South Tolgus	2½	12
800	South Towan	10	1½

BRITISH MINES—continued.

Shares.	Company.	Paid.	Price.
256	South Treiawney	15½	14
128	South Treviand	16½	30
128	South Wheal Basset	—	120
124	South Wh. Francis	67	200
256	South Wh. Hope	—	5
1000	South Wh. Maria	3½	2
256	South Wheal Rose	11½	1
10000	Southern & Western, Irish	2	4–5
256	St. Austell Consols	7	16
94	St. Ives Consols	—	500
1000	Stray Park	43	21
9600	Tamar Consols	3	5½
1024	Tavy Consols	1½	2
6000	Tincroft	7	10½
256	Ting Tang	80	30
128	Tokenbury	140	15
256	Trehane	2	21
4000	Trelegh Consols	6	3½
256	Trunow Consols	—	30
96	Tresavean	10	225
120	Trethellan	5	25
120	Treviskey and Barrier	61	130
256	Trewallack	—	21
128	Trewellard	12	25
000	United Hills	5	1
4100	United Mines	300	500
10240	Victoria Tin	1	1½
256	Wellington Mines	15	25
128	West Basset	45	10
256	West Caradon	20	190
128	West Cargoll	2	12
512	West Fowey Consols	40	35
—	West Kekewich Consols	—	3
256	West Providence	—	15
200	West Seton	—	42½
120	West Trethellan	5	25
256	West United Hills	4	4
256	West Wh. Friendship	7½	4
3845	West Wheal Jewel	11	9½
2560	West Wh. Maria	1½	3½
256	West Wheal Shepherd	—	6½
256	West Wheal Toigus	21½	6
256	West Wheal Treasury	14½	10
240	Westerlake	3	3
5200	Wicklow Copper	5	15½
184	Wheal Adams	41	30
1000	Wheal Agar	—	—
256	Wheal Albert	10	8
128	Wheal Acland	13	3
256	Wheal Allen	1½	4
227	Wheal Anderton	14½	18
128	Wheal Ann	—	50½
128	Wheal Arvose	2	4
2560	Wheal Barbara	1½	1½
256	Wheal Blencowe	—	10
256	Wheal Byon Consols	1	3
136	Wheal Clifford	—	190
1024	Wheal Concord	5½	5½
6000	Wheal Curtis	1½	1½
512	Wheal Elizabeth	2½	3
256	Wheal Fortescue	8½	11
2048	Wheal Frederick	2	2
384	Wheal Franco	23	24
256	Wheal Gill	19½	9
128	Wheal Harriet	45	48
2048	Wheal Holwell	1½	1½
256	Wheal Jane	6	30
256	Wheal Kekewich	4	4
256	Wheal Louisa	5½	10
256	Wheal Maria (Hayle)	14	20
1024	Wheal Maria	1	500
4000	Wheal Martha Consols	5	2½
256	Wheal Mary Ann	5	70
1024	Wheal Mary (Calstock)	5	1–2
256	Wheal Mary Consols	34	25
256	Wheal Mary (Lanivet)	2½	4
256	Wheal Mary Pentuan	1	5
256	Wheal Maud	1½	4
128	Wheal Metha	21	110
128	Wheal Pollard	13½	12
110	Wheal Prospect	4	11½
128	Wheal Providence	34	40
128	Wheal Reeth	1	60
128	Wheal Rose	60	80
99	Wheal Seton	130	800
1024	Wheal Spearne	1½	3
256	Wheal Sisters	27½	20
360	Wheal Trelawney	7½	127½
256	Wheal Tremaine	1½	3
128	Wheal Trew	—	21
256	Wheal Trewennan	—	10
128	Wheal Venhand	13½	10
127	Wheal Virgin	—	—
256	Wheal Vlow (Perranz.)	1	½
1024	Wheal Walter	4	3
256	Wheal Williams	2	18

FOREIGN MINES.

5000	Alten Mining Company	14½	3½
15000	Asturian Mining Co.	5	4½
20000	Australian	2	4–5
10000	Anglo-Mexican Co.	100	1
2374	Ditto Subscription	25	2½
2000	Bolanos	150	6½
12000	Ditto Scrip	15	—
10000	Brazilian Imperial	20	2½
12000	Cobre Copper Co.	49	18½
8500	Colombian Co. regis.	85	4½
5000	Ditto Scrip		
10000	Copiapo Mining Co.	14	2½
20000	General Mining Ass'n.	20	15½
5051	Mexican Company	59	—
12000	Mocambas & Cocaes	25	6½
29320	El del Monte, regis. Ditto unregistered	28½	av. 3½
	Ditto Red Debentures	—	21
	Ditto Black ditto	—	17
	Ditto Loan Notes	150	125
7000	Royal Santiago	10	7½
2000	Pachuca Mines	3	3½
11000	St. John del Rey	15	9½
63174	United Mexican	28½	2½

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

LATEST CURRENT PRICES OF METALS.

LONDON, JANUARY 15, 1847.

	£ s.	£ s. d.
IRON—Bar *a*..Wales..*ton*	0 0— 9 0 0	
,, ..London ..	0 0—10 0 0	
Rail rods ,, ...	0 0—10 15 0	
Hoop (Staf.) ,, ...	0 0—12 0 0	
Sheet ,, ,, ...	0 0—13 0 0	
Bars ,, ,, ...	11 0—11 10 0	
Welsh cold-blast foundry pig	4 5—5 5 0	
Scotch pig *b*, Clyde	3 15—3 17 0	
Rails, average	9 15—10 0 0	
Russian, CCND *c*..	0 0— —	
,, PSI	0 0— —	
,, Gourieff	0 0— —	
,, Archangel	0 0—13 10 0	
Swedish *d*, on the spot	0 0—11 15 0	
,, Steel, fagt.	0 0—16 5 0	
,, ,, kegs *e*	15 0—15 10 0	
COPPER—Tile *f*	87 10—92 0 0	
Tough cake	88 10—93 0 0	
Best selected	91 10—96 0 0	

	£ s.	£ s. d.
COPPER—Ordin. sheets, *h*.	0 10— 0	10
,, bottoms .	0 11— 0	11
YELLOW METAL SHEATHING	0 0— 0	0 8½
TIN—Com. blocks *g*.. *cwt.*	0 0— 4	18 0
,, bars	0 0— 4	19 0
Refined	0 0— 5	1 0
Straits *k*	0 0— 4	18 0
Banca	0 0— 5	1 6
TIN-PLATES—Ch., IC *i*, *box*	1 10— 1	12 0
,, IX ..	1 16— 1	18 0
Coke, IC	1 7— 1	8 0
,, IX	1 13— 1	14 0
LEAD—Sheet *l* ..... *ton*	19 5—19	10 0
Pig, refined	0 0—21	0 0
,, common	18 10—18	15 0
,, Spanish, in bd.	17 10—18	0 0
SPELTER—(Cake) *l*	20 0—20	5 0
,, ,, for arrival	19 12 6	19 15 0
ZINC—(Sheet) *m* export.*	27 0— 28	0 0
QUICKSILVER *n* ..... *lb.*	0 0— 0	4 6

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto. In kegs ½ and ¼-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash. in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash. *m* Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

[From a Correspondent.]

IRON.—Welsh and Staffordshire continue firm, and in good demand; but Scotch pigs have given way, and there are now sellers at quotations.

COPPER is nominally at last week's prices, which are still quoted by some of the houses—no orders, however, are taken thereat; an advance of ½d. per lb. is expected to become general in a few days.

TIN continues as last.—TIN-PLATES are steady.—LEAD firm.

SPELTER has suddenly improved, and several parcels have been sold at 19*l.* 15s. to 20*l.*; but there are no sellers under 20*l.* 5s. on the spot.

[Communicated by Messrs. Whitcomb and Barton, Old Broad-street.]

English iron continues exceedingly firm. There are still large orders for bars unexecuted—the limits being below quoted prices, and sellers will not give way. Welsh and Staffordshire pig-iron have been in considerable demand for immediate consumption, and better rates obtained. Scotch pig-iron is not so good. We quote the prices nominally 75s. for mixed Nos., at which there are sellers. Nothing worthy of remark in other metals.

GLASGOW PIG-IRON TRADE, J

NEW YORK, Dec. 30.—Lead advanced last week to $4·50, at which considerable sales were made. This week it slightly receded, and sales were made at $4·37½, at which the market closed. The product of the American mines is estimated at from 1 million to 1¼ million pounds less this year than last. The sales of Scotch pig-iron have been made at from $26 to $30 per ton. English bar (refined) from $67 to $90; common ditto, at $75 to $78—market steady. Spelter sales at $4½; sheet zinc, at 7 to 7¼ cents. No change in copper since last review.

EXPORTS OF METALS TO ALL INDIA FROM LONDON AND LIVERPOOL.
FOR THE TWELVE MONTHS OF 1845 AND 1846.

Metals.		1845.	1846.	In. in 1846.	Dec. in 1846.
Spelter	Tons	3184	4577	1393	—
Copper		4849	3585	—	1264
Iron, British		11973	8268	—	3705
Ditto, foreign		1196	3506	2310	—
Tin-plates	Boxes	10921	6988	—	3933
Lead	Tons	1039	630	—	409
Steel		1681	815	—	866
Quicksilver	Bottles	258	755	497	—

AVERAGE PRICES OF METALS.

METALS.		1840.	1841.	1842.	1843.	1844.	1845.	1846.
SPELTER	per ton	£23 10 to £20 0	£28 0 to £30 0	£27 10 to £28 0	£22 5 to £22 10	£22 12 6 to £22 15	£20 10 to £21 0	£19 12 6 to £19 15
ENGLISH BAR-IRON	"	8 0 — 0 0	6 15 — 0 0	5 5 — 5 10	5 0 — 0 0	6 15 0 — 0 0	9 15 0 — 0 0	10 0 0 — 0 0
PIG-IRON, in Wales	"	4 0 — 0 0	3 15 — 4 0	3 15 — 0 0	3 5 — 0 0	4 0 0 — 0 0	5 0 0 — 5 12 6	5 0 0 — 5 5 0
" at Glasgow	"	3 10 — 3 15	3 0 — 3 5	2 7 6 — 2 10 0	2 3 — 0 0	3 2 6 — 0 0	4 2 6 — 4 5 0	3 17 6 — 4 0 0
SWEDES IRON	"	13 5 — 0 0	13 10 — 0 0	11 10 — 12 0 0	10 10 — 0 0	10 0 0 — 0 0	11 10 0 — 12 0 0	11 10 0 — 0 0 0
SWEDISH KEG STEEL	"	18 15 — 0 0	19 10 — 0 0	18 0 — 0 0	17 10 — 0 0	16 0 0 — 0 0	15 0 0 — 0 0 0	15 0 0 — 15 10 0
COPPER, English Sheathing	per lb.	11¾d to 1s	11¾d	9¾d	9¾d	9¾d.	10¾d	10d
" Cake	per ton	£100 0 to £0 0	96 0 — 98 0	84 0 — 0 0	86 0 — 0 0	84 0 0 — 0 0	93 0 0 — 0 0	88 10 0 — 0 0
TIN, English Block	per cwt.	63s	78s	63s to 65s	70s	71s	103s	98s
" Foreign Banca	"	76s	74s to 75s	67s 6d	70s to 72s	63s	92s	103s
" Straits	"	74s	69s to 70s	60s to 61s	70s	63s	91s	98s
TIN-PLATES, IC	per box	29s to 33s	28s. to 32s 6d	26s to 29s	23s 6d to 27s	25s to 31s	29s to 33s	27s to 33s
LEAD, English Pig	per ton	£19 13 to £0 0	£20 0 to £0 0	£17 5 to £17 10	£17 10 to £0 0	£16 15 to £0 0	£19 10 to £0 0	£18 10 to £0 0
" Spanish	"	19 0 — 0 0	20 0 — 20 5	17 5 — 0 0	16 10 — 0 0	16 — 16 10	18 10 — 0 0	17 10 — 0 0

COPPER ORES.

NO SALE on Thursday last, January 14.

Copper ores for sale on Thursday next, at Pearce's Hotel, Truro.—Mines and Parcels.—Devon Great Consols, Wheal Maria, and Wheal Fanny, 1200—West Caradon 365—Poldice 351—Fowey Consols 247—Wheal Friendship 236—Wheal Jewel 123—Bedford United Mines 110—Holmbush 98—Wheal Maiden 67—South Towan 63—West Trethellan 49—Pembroke 1.—Total, 2910 tons.

Copper ores for sale on Thursday week, at Pearce's Hotel, Truro.—Mines and Parcels.—Consolidated 973—United Mines 729—Treavean 464—South Caradon 396—Treviskey 332—Ferran St. George, Bolenna, and Wheal Leisure 296—Grambler and St. Aubyn 239—Treleigh Consols 171—Trethellan 161—Par Consols 135—Wheal Sisters 109—Wheal Ellen 101—Barrier 76—Ting-Tang 60—Wheal Andrew 58—Wheal Clifford 57—Redruth Consols 23—Wheal Union 14.—Total, 4294 tons.

COPPER ORES

Knockmahon 70, ditto 64, ditto 31—Chili 54, ditto 50, ditto 45—Berehaven 114—Burra Burra 80—Glasgow Slag 52—Kapunda 20, ditto 13, ditto 8, ditto 7, ditto 2.—Total, 1095. For Sale, at SWANSEA, Jan. 20.—Cobre 96, ditto 92, ditto 91, ditto 80, ditto 76, ditto 51—

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Carr's Hartley 21 6—Hasting's Hartley 21 6—Holywell Main 23—Tanfield Moor 22—West Hartley 21 6—West Wylam 21—Wall's End Brown's Gas 22 6—Elm Park 25—Killingworth 25 3—Hilda 24 9—Wharncliffe 25 6—Belmont 26 3—Lambton 27—Whitwell 25 6—Adelaide Tees 27—Cowpen Hartley 21 6—Sidney's Hartley 21 6.—Ships at market, 19.

WEDNESDAY.—Carr's Hartley 21—Hasting's Hartley 21—Holywell Main 23—West Hartley 21—Wylam 22—Wall's End Hilda 25 3—Hetton 26 6—Lambton 26 6—Stewart' 26 6—Cowpen Hartley 21—Sidney's Hartley 21.—Ships at market, 12.

FRIDAY.—Carr's Hartley 22 6—West Hartley 22 6—Wylam 23—Wall's End Hilda 25 9—Killingworth 26 3—Eden Main 27—Braddyll's Hetton 27—Stewart's 28—Sidney's Hartley 22 6.—Ships at market, 9.

HEMP AND FLAX MANUFACTURING COMPANY.—We understand that applications for 10,000 shares above the number into which this company is divided has been applied for by most respectable parties—in consequence, no further applications can now be received, and the allotment will be proceeded with in a few days. Mr. Simpson (of Moorgate-street) has been the agent in the remodelling this important company.

BLACKBAND IRONSTONE.—An extensive field of this valuable mineral has been discovered at Penston by Mr. T. H. Moor, mining engineer there; the thickness is from 16 in. to 18 in., and the quality is equal to the celebrated Airdrie blackband; and, from its geological position, it is believed to exist in a great portion of the Lothian coal-field. Penston lies about 12 miles east of Edinburgh, on the side of the North British Railway.

IRON ORE IN SCOTLAND.—A valuable seam of iron ore, 10 in. thick, lying immediately above the coal, has been discovered in the parish of Gladsmuir, East Lothian. The proprietor has refused high offers for the mineral, and intends erecting extensive works for realising the benefits of his lease and discovery. The ore is said to contain 30 to 40 per cent. of iron of the finest quality.

Railway enterprise appears to give an impulse to even the humblest and oldest forms of labour. During the past year it has been more than usually beneficial to the brick trade, in consequence of the increasing demand for arching tunnels, viaducts, and stations. During 1846, upwards of one million were sent to Edinburgh for extending railways, and arching tunnels in that city.

Cook's Kitchen.—R. Blamey was killed here by a fall of rock.
Dolcoath.—J. Kemp fell down a shaft and was killed.
Carn Brea.—T. Gundry was much injured by a premature blast.

NEW PATENTS AND REGISTRATIONS.

Extracts from the Mechanics' Magazine Weekly List of English Patents:—

J. B. Pierret, Old Compton-st., Middlesex, engineer, for improvements in steam-engines.

D. P. Gamble, gent., Crouch End, Middlesex, for improvements in electric telegraphs.

John Platt, Oldham, Lancaster, machine maker, for certain improvements in the method of consuming smoke and economising fuel.

S. R. Parkhurst, Leeds, manufacturer, for improvements in rotary engines.

NOTICES TO CORRESPONDENTS.

The MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained before Twelve, of all the news agents, at the Royal Exchange and other parts of London.

"J. W. S." (Eccles, Manchester) should apply to any of the brokers, whose addresses appear in our advertising columns. All the information, with the required opinion, will be readily forwarded.

We are obliged to Dr. Feuchtwanger (New York) for his communication, and should have been glad to attend to his request, by giving a place to the papers referred to, but they have, unfortunately, miscarried—perhaps, he will favour us by forwarding another copy.

THE MINING JOURNAL
And Atmospheric Railway Gazette.

LONDON, JANUARY 16, 1847.

The quarterly meeting of the Staffordshire ironmasters has terminated without any *declared* alteration in the prices, as agreed at the last meeting, for manufactured iron—notwithstanding, from the very low stock of pig-iron in Staffordshire, this description of iron was in demand at 5s. to 5s. 6d. per ton better than at the last quarter-day, and the markets in England and Scotland have a good appearance for a progressive advance in price for the rough material, which, for some time time past, has not borne a relative proportion to the value of manufactured iron.

A matter has been just brought under our notice which alone requires publicity to attract the attention of the mining public, as involving a question of the first importance, although we must say that we attach but little to the results. We will briefly state the circumstances, and with it our plain notions, without legal quibbles being involved—while the importance to be attached to the settlement of the question, assuming for a moment that it was adverse to the mine adventurer, would be such as to prostrate all mining in this country, and would destroy that confidence which ever has been reposed in the administration of the law which we have understood to be based on equitable principles, and which admits usage to be equivalent to legislative enactment. The case is simply this—a party, acting as broker or agent, or who may be considered as principal in the transaction, sells certain shares in Wheal A and Wheal B, situate in the county of Cornwall—both mines being worked on the Cost-book System, and meetings held on the mine every two months, when the cost sheets are submitted and passed, and the amount required for working the mines called for, or the surplus divided, in the shape of dividends or profits to the adventurers—indeed, as we are informed, the mines being conducted strictly on the Cornish system, there being neither London management nor scrip certificates. The transfer of the shares referred to were made in the ordinary form, and transmitted to the purser, to be entered in the cost-book—the value or cost of them being designated in the transfer or order to the purser, as is usual, "for a valuable consideration." So far, it would appear to us all was perfectly regular, and strictly in accordance with the ordinary usage, which has been adopted for the past century, as affects the mines of Cornwall; and here our narrative is brought to a close as regards the transaction itself—our business now being to direct the attention of our readers to the sequel. An information has been laid against the party transferring the shares, whereby he is said to have rendered himself liable to a penalty of *50l.* on each transaction, in addition to a further penalty of five times the amount of the stamps, which, having relation to the purchase-money, it is contended should have been attached to the several transfers, and which, we presume, will, in due course, come before the Court of Exchequer, and will undoubtedly be carried into a superior court and another tribunal, by way of appeal, should that body determine that the penalty has been incurred. We think, however, there is but little cause for apprehension of such being the result—inasmuch, that the effect would be, that a transfer of a share, as in East Wheal Rose, would be attended with the cost of 12*l.* by way of stamp; and other mines in proportion, according to their relative value.

We need hardly say, that if such a destructive course were to be pursued, the transactions in mines would be not only of a very limited nature, but the value of the shares would be affected in a *ratio* with this impost, and thus reduced in value: however, it needs not that we should dwell on the subject at the present moment, as the first step only is taken, while we should much wonder if her MAJESTY'S ATTORNEY-GENERAL will proceed further, without some reflection, or consulting those learned in the law, and possessing some knowledge of the "customs" of Cornwall, and the laws applying to its mines. In the Joint-Stock Companies' Registration Act, it will be remembered that a clause (63) was inserted, excluding mines carried on upon the Cost-book System, from its application; and we need hardly say, that such a recognition is a sufficient reply to the "information." We may add, that immediately upon the matter being communicated to us, we felt it a duty, as the representative of the mining interest, so far as the press is concerned, to wait upon Mr. WHITMORE, Q.C., the registrar, who gave us to understand, that he was in perfect ignorance of any steps having been taken, and that such must have emanated from "information" laid at Somerset House, at the office of Stamps. We think it behoves the parties affected by the step taken by the ATTORNEY-GENERAL, to ascertain who is the real informer, and to expose him. We will readily lend our aid. The subject has already attracted attention in the City among parties largely interested in mining adventures, and the proceedings will be narrowly watched—while, we feel assured, there will be no want of unity of action to support and uphold legitimate mining.

Our Gallic contemporary, the *Moniteur Industriel*, has again thought proper to devote three columns of its number of the 24th December, in answer to the remarks we made on the 12th ult.; and we should have treated the continuation of its anti-English remarks in favour of the ultra-protectionists of France with silent indifference, were it not requisite on our part to substantiate what we have ever boldly asserted, and which cannot be contradicted either by this would-be advocate of the monopolist party, or any of the more influential of the Paris journals. We have never pretended to be the champion of an *entirely* free trade system in this country with other nations, to the detriment of our own interests, by admitting their products without a sufficiently protective duty to give us a decided preference in all quarters of the globe, and that at prices with which no other nation can compete. There exists, unfortunately, in the British people generally, a disposition to give a preference to every thing foreign; while, on the other hand, the most oppressive and unjust duties are exacted in foreign ports upon our produce, and JOHN BULL is laughed at for his folly. When we see that other nations will extend a reciprocal intercourse, by the reduction of their customs imposts, then shall we become the supporters of thorough free trade, and not till then—although we firmly believe that an unfettered interchange of the various productions of different nations, would tend to the increased advantages and happiness of the great human family. As we have invariably explained, France cannot produce sufficient coal or iron for her own consumption, and must import from her neighbours; and we maintain that it is a most unjust, and even an unwise policy, on the part of that Government, to continue the enormous import duties on those articles, for the purpose of upholding an injurious monopoly, and supporting the extortionate demands of a few grasping capitalists, to the great injury of the entire nation. If these requisite materials were admitted at a moderate and sufficiently protective duty, to cover the cost of the make in France, her railways would not be standing still for want of *materiel*, and her merchant marine would give extensive employment in shipbuilding. The Minister of Commerce has promised fair, to reform the tariffs in the next session; but we believe him to be too much under the control of the protectionist party, to dare to bring forward such a measure, although it would be productive of the greatest advantages to the nation at large. Glad shall we be if we are wrong, as we wish to see an unfettered system of commerce adopted, and which is but due, in return for the great and extensive reduction made by our late Government on the import of French produce. Let not our contemporary "lay the flattering unction to his soul," that we have any fear that these oppressive, prohibitory laws will last for ever. Oh, no! the axe is already laid at the root—the system itself is rapidly working its own downfall; and the question is being generally asked, why should we French artisans pay three times the price for iron here, that we could import it for from England? The outcry against the abuse is general, and liberality must eventually triumph, in spite of the exulting tone of the *Moniteur*, "that the Government have not the hardihood to encounter the protectionist phalanx." Time will show; and, in the meantime, we advise our contemporary not to indulge in too lofty flights—remembering that the higher he soars, when the blow does come, the greater will be his fall.

The question of imposing a royalty on the mineral produce of South Australia is at length set at rest—a letter having been received by Messrs. E. J. WHEELER and Co., Australian agents, from the Under Secretary of State, informing them that the regulations for reserving a royalty on minerals, made by Lieut. ROBE, continue in force, and that it is intended they should be confirmed. We have, on former occasions, remarked on the unconstitutional mode of proceeding in this matter by the Governor and Council, as well as the decidedly bad policy of throwing obstacles in the way of the full development of all its capabilities in a young and rising colony. In despite, however, of an Act of Parliament, which made over all lands purchased in South Australia, without imposts of any kind, as soon as it is found that they contain valuable mineral property, a royalty is declared to be payable on all minerals which should be raised; and although Earl GREY must be aware that a petition most numerously signed by the colonists, is on its way for presentation to Parliament for a fair consideration of the subject, he takes upon himself to state, that "it is intended to confirm the regulations." We sincerely trust the subject will be properly taken up on an early day after the meeting of Parliament; and "secretaries for the colonies," and "lieutenant-governors" be taught the useful lesson that they will not be allowed to become despotic law makers, or to play those "fantastic tricks," which render their conduct despised, and themselves and their offices treated with contempt by all the well-thinking portion of the community.

Referring to an article which appeared in our columns of the 2d inst., giving the returns of the past 12 months from our Cornish mines, whereby a considerable falling off was manifested as regards the proceeds, we now have to direct attention to statistical data bearing on the question, whereby will be rendered pretty clear the relative positions of the miner and smelter—while the cause of the diminution in the returns is to be attributed to the depreciation in the standard, and certain movements, of which more anon. It will then be our object to illustrate the subject under notice, and to make a comparison between the past and present, in affording such important evidence as will, we apprehend, at once be conclusive; and as the question must be again brought under the notice of our readers, we trust such will be followed up by those who not only feel an interest, but possess the means of acquiring and furnishing information, as well as drawing correct conclusions.

COMPARATIVE VALUES OF COPPER ORE.
DURING THE FOLLOWING PERIODS:

Quarter ending	Produce.	Standard.	Fine Copper.	Amount of Money.	Price of Copper
1841—April 1	7½	£123 11 6	2370	£302,602 5 6	£100 0 0
July 1	7½	124 2 0	2253	195,817 16 6	98 0 0
Oct. 7	7½	125 11 0	2702	236,819 12 0	98 0 0
1842—Jan. 2	7½	127 1 0	2307	205,777 11 0	98 0 0
March 31	7½	119 5 0	2344	189,496 18 0	96 0 0
July 7	7½	111 7 0	2541	190,777 1 0	90 0 0
Oct. 6	7½	110 6 0	2718	200,872 1 6	88 0 0
1843—Jan. 5	7½	110 4 0	2568	188,296 18 6	84 0 0
April 6	7½	111 5 0	2858	213,044 3 6	84 0 0
July 6	7½	108 19 0	2782	202,232 15 6	84 0 0
Oct. 5	7½	105 4 0	2964	204,430 17 6	86 0 0
1844—Jan. 4	7½	112 7 0	2698	203,085 1 0	83 0 0
April 4	7½	112 19 0	2698	219,019 3 0	84 0 0
July 4	7½	108 16 0	2908	188,721 0 0	84 0 0
Oct. 3	7½	104 2 0	2677	195,626 17 6	84 0 0
1845—Jan. 2	7½	103 16 0	2907	198,006 16 0	91 0 0
April 3	7½	103 9 0	3152	215,284 3 0	91 0 0
July 3	8	100 5 0	3294	226,373 3 0	93 0 0
Oct. 2	7½	109 8 0	3353	250,255 0 0	93 0 0
1846—Jan. 1	7½	108 15 0	3081	228,019 18 6	93 0 0
April 2	7½	106 0 0	2980	207,697 10 0	93 0 0
July 2	7½	100 17 0	3033	209,810 11 6	93 0 0
Oct. 3	7½	100 0 0	3003	196,486 16 0	90 5 0
1847—Jan. 5	8½	101 13 0	2830	191,197 9 0	87 10 0

Having thus given the results of the past six years, as relates to the produce of the copper mines in Cornwall, with the value and standard for such period, we will, on the present occasion, merely advert to the anomaly which the table itself presents, as regards the price of ore, with a certain produce at one period and another—the relative prices of metallic copper and the standard. We shall, on another occasion, give a more perfect synopsis, at once illustrating the injury done to the miner and mine adventurer, and observe on the benefit secured by the smelter.

[FROM A CORRESPONDENT.]

We have ever endeavoured to support the interests of British mining, by adopting those views which we considered as protective to the miner and their measures, by opposing every attempt to effect the free importation of foreign ores, from a belief that such ores could be advantageously smelted in this kingdom *only*, and, consequently, could afford to pay an import duty arising from the richness of the ores. But our faith in such a belief has of late felt, and continues to feel, a severe oscillation, when we see, in the place of these ores being brought from South America, copper, the produce of smelting in that country, and in a state sufficiently fine for the French market. It appears now that it is no longer a matter of uncertainty, whether smelting operations can be carried on in these countries; for, if the absence of coal were deemed by us one preventative, we find that their immense forests of timber will amply supply that deficiency; and it is, therefore, equally certain that the copper so produced must meet our own produce in the markets of the world. And since we learn that smelting abroad has been resorted to, in consequence of that protective duty, we feel that the consideration of this question is one of deep interest and vast moment. We find that the importation of foreign ores, smelted at Swansea, has greatly decreased during the past year—whilst also the export of copper to foreign markets has also fallen off to a vast extent. At the same time, we do not consider that the importation in France from South America, has enabled the French merchants to supply the deficiency we have experienced in our foreign markets; but it has evidently lessened our exportation by receiving it direct from the smelting works of South America. It has been urged by some that were the tariff revised, and the duty repealed, the influx of low price ores from Cuba and South America would depreciate the value of the metal; of this we think there is but little fear, from the increasing demand at home, in our colonies, and other foreign markets. As another argument in favour of this question, we would state that the home-raised ores (which are generally of an

inferior quality) are considerably benefitted by the admixture of the rich ores of Chili and Cuba: then, why should we be alarmed, as to the injury which it is presumed will result to the home miner, if that misnamed "protective duty" be taken off? for it is apparent, that British ores are more desirable to the smelter, being necessary as a mixture with these foreign rich ores—the one acting as a flux to the other. That the smelters possess a monopoly, we are aware; and the same will be enjoyed by them until competitors be found, who will seek a share of their business. But we would ask, who are those smelters, that would thus desire to see the destruction of the native industry of the home miner? Are they not all engaged (more or less) in the speculations of British mines? Are they not the foremost in the advancement of native enterprise, by the development of the mineral deposits in Cornwall, in Wales, in Ireland, or Scotland? Then, can it be presumed that they are desirous of crushing the native miner, on whose industry their smelting furnaces have been raised, and limiting the employment of their capital—cutting off their home supplies, for the exclusive dealing in foreign ores? These remarks emanate from the fact of a large quantity of copper from South America having been sold in this market for France at a *much lower rate than English copper had been obtaining*—the sale of the copper being one of necessity, as the amount of duty it is liable to prevented the purchase of it for British uses.

It is a long time since a proposal to commemorate the useful and exemplory life of one of the patriot fathers of the country has given us so much gratification as the measures now set on foot to endow an agricultural college and model farm, in honour of the late J. H. Rodd, Esq., of Trebartha Hall, Cornwall. We are nearly as much gratified to notice the particular kind of testimonial intended, as at the motive out of which the commemoration arises. Agriculture is undoubtedly one of the most ancient, the most useful, and the most universal arts—it is every where the foundation of the true wealth of nations; and whatever tends to increase its utility and its productiveness, is so much added to the efficiency and the resources of that great storehouse, to which the human family looks, season after season, for the satisfaction of its material wants. It is not a little strange that an art, which has run down to us from the very first fountains of antiquity, and has spread itself in one form or other throughout the whole world, has in no age, nor in any country, had its practise illuminated by the light of the subsidiary arts, or its principles governed by the voice of the illustrative sciences. It is probable that the last half score years have done more for the intelligent and methodical treatment of the European soil, with a view to its edible produce, than the preceding half score centuries had done; and we are quite satisfied that the establishment of agricultural schools of instruction, and institutions of a like character, are the very streams that require feeding and replenishment to fertilise the vast field of agricultural labour. That so desirable and so necessary a foundation should be either delayed or abandoned for the want of such very limited funds as are necessary, is what we should be exceedingly slow to believe; for it would argue such a lamentable want of public spirit, and such an indifference on the part of the landed gentry to one of the great interests of the county, as it would be a bitter censure upon them to admit the truth of, even speculatively. In fellowship with such an institution as the one purposed, it would be to the public advantage to found also a *mining college of instruction*, where, at least, the geological character of the surface, and a great part of the operations at grass, as well as an exhibition of the powers of mining machinery, and suggestions for their improvement, might beneficially form a part of the training of the students. Conjointly with an agricultural school, or independently of it, a foundation for instruction in the mining arts is a great and public desideratum; and we trust the esteemed baronet, who may be said to stand at the head of the mining interests of the county, will shortly resume and complete his labours in that behalf.

It would seriously injure the very best cause that was ever yet presented at *nisi prius*, if, upon the hearing, the chief evidence was furnished by directly and largely-interested parties. In this unenviable predicament are the South Devon and South Cornwall lines of railway—their merits are spoken to by those only who have a permanent and vital interest in their prosperity. The world looks on with amazement, asking on every hand, how can such heavy lines be rendered practicable?—if practicable, how can they pay?—and, if both, by what occult attraction can the traffic of the adjacent districts be made to gravitate upon lines so eccentric and so remote? To this string of questions, and even a longer one, they present the public with a draft of their lines, which twice traverse the curve of an arch, but never once approach its chord; and the feeling which was at first simply one of curiosity, ends with being one of astonishment. However, our business at present is less with the tortuous and heavy character of the lines before us, than with a statement of the chairman of the South Devon Company, to the effect, that the South Devon Railway sustained very little injury by the gales of November last. Our readers are aware that this line runs down from the foot of the Southeney, at Exeter, along the valley of the Ex, almost to the coast, when it suddenly wheels away to the right in its course to Plymouth. Following that singular route, it is brought occasionally very close indeed to the waterside; and we assure our friends, that when the equinoctial storms pour in upon that coast from the south-west, travelling along its margin, is by no means a drawing-room affair—the trains, and the line of South Devon found it so last autumn. The vexed Neptune lashed the coast so furiously at a point or two where the railway works were weakest, that, after more than a Titanic hammering of 24 hours, the South Devon line was literally cut in two—it could not be passed over—and carriages of one description or another were plying from the sound parts of the line, avoiding that which was for a time in a state of wreck. This is substantially the statement of persons on the spot, and conversant with the facts. It appears to us to be just the truth; but the truth is often a good deal too much, to suit the taste of the patrons of a bad railway. Now, a railway that is twice a year liable to casualties so serious, and at other times, in the rainy season particularly, to be flooded over its rails, as was recently this line, should be ventured upon—just as prudent seamen venture to spread their canvas in the tropics, only when the quicksilver is high, and the index hand points to *set fair*. This line, reaching Plymouth from Exeter by a strangely-circular route, is at the former place to receive and deliver the heavy traffic of Cornwall.

The South Cornwall line itself is scarcely less dangerous and indirect than its fellow line through the south of Devon; between them the most indifferent observer will notice a strong family likeness, and be struck with their singularly cognote faculties Mr. Brunel is both the apologist and engineer of this line; he is the engineer also of the South Devon, which bears strong marks of his peculiar style and manner as a railway artist. What will be its final form, it is impossible to say; it has, Proteus like, passed from figure to figure so frequently, that it is hazardous to predicate what will be the ultimate arrangements of its parts. It is to assume the concrete, if it ever takes that form, by having shaken over it the purse of the Great Western. At first they were to bridge over the navigable river of the Fal; then they were forbidden to do it. Again, they purposed getting out of the county, by a bridge over the anchorage of her Majesty's line-of-battle-ships at Hamoaze. On that wild proposition, they were sent to resurvey the ground, and find a better door, than that watery one, at which to enter the county of Devon; they then ran up the Tamar to Saltash, and sought to end their eastern troubles by a penetration of the river at that point; but the stream there is too wide, or too deep, or too swift, or too something, for their purpose, and the rumour is, that they are relinquishing that intention also. But, between the Fal and the Tamar, their perplexities are quite as serious as those at the extremities of their line. Gradients of startling severity, cuttings of such a depth, and viaducts of length and height, that the nerves of the engineer who purposes—and of the passengers who endure them—will have need of a long course of chalybeates, or even they can be built, or used with composure. It is therefore to us obvious, looking at the Cornwall line separately, that, in all the leading elements of a practicable and accessible highway for the county, it is deplorably defficient; but it is only when it loses itself in the watery labyrinth of the South Devon, that the exuberance of its vices are seen in full blossom. Turning a little Mr. Pitt's monumental eulogy in Guildhall, it is in that connected view that their properties, which were rare in their separate absurdity, become wonderful in their combination. We have no desire to entertain, or to express, opinions as to these undertakings, which can justly be considered unfair, partial, or sectarian; but our thorough conviction is, after having well pondered and examined the capabilities of these lines, and especially of the Cornwall, that they can never satisfactorily do the carrying work of the district; and that other lines, with fewer physical impediments, and less indirection, must ultimately, if not very shortly, supersede them.

It will be believed that we take a lively interest in whatever concerns the county of Cornwall, whether as to the well-doing of its ports, or the accumulated whole of that industrious, and we hope thriving, community. It was with such a feeling that we read a few days since an advertisement in the *Falmouth Packet*, that the Commissioners of her Majesty's Woods and Forests had sent down agents to ascertain the practicability of supplying the town of Falmouth with water of good quality, and in the greatest abundance; and we understand an Act of Parliament will be obtained this session, to give the inhabitants of the town, and the numerous shipping (royal and mercantile) assembling at that port, the full benefit of so wholesome and so necessary an element. We learn that the population of the town numbers from 8000 to 10,000, and that the average number of vessels annually visiting its roadstead is about 1500. It is unnecessary for us to say, that these being vessels engaged in the foreign trade of the kingdom, they are frequently, on arrival in the Channel, distressed for water; and when entering the port on that errand, the quantity they can get is always uncertain, and generally insufficient. Falmouth is, by capacity and position, *the great port* of the county; but so long as its reservoirs of water are a few pits parched and empty in the summer season, it must continue in that property of a maritime rendezvous, a little and an avoided anchorage. To the permanent population of the town the daily convenience of such an article, always at hand and always in abundance, for the cleanly and wholesome purification of their dwellings, cannot need to be pointed out.

We believe Falmouth was one of the coast towns visited, some years ago, by the Asiatic scourge; it may be so visited again. Undoubtedly, great cleanliness, and an instant every day removal of the drainage of towns, are among the most effectual known means of restraining its ravages. It is, we apprehend, one of the necessary duties of the Town Council, *under the statute*, to protect, and, so to speak, to provision the town with this particular article; it is one of the objects for which they are called to exercise a corporate function, and for which they are invested with municipal authority—that they might exhibit a provident care, and a watchful vigilance, as to the comfort and health of the township, of which they are the legal guardians. Should the black scourge reappear among them, it will then, we think, be a painful and a pitiful consolation, that the Council has been careful of the corporation funds, but amazingly profligate of the lives of their townsmen. It is very well just now, when the rains of winter are present or expected, to set lightly by a store of fountains and reservoirs of water; but let the dog-days be overhead, and the bridegroom sun streaming away with his usual fervour, through Taurus and Leo, and then it is probable a higher and a juster value will be set on what is tantamount to a river of pure water visiting every man's dwelling-house.

In our Journal of this day, will be found a report of the proceedings at the usual half-yearly meeting of the adventurers in the Mining Company of Ireland; and it is with regret we observe, that the position of the company is not of so prosperous a nature as we generally have to record. This, be it observed, is not from any want of energy on the part of the directors, or absolute falling off in the produce of the mines—but from the peculiar position in which they are placed with respect to the tenure of the Knockmahon Mines, which had heretofore made such large returns. From the exorbitant rent of the Ballinasisla section of the mines entailed upon them by the 10th Geo. I., c. 5 (Irish Parliament), the dues in the past half year was 984*l.* 9s. 8d., and 130*l.* for surface accommodation; while the profit on the whole of the Knockmahon Mines has been but 1154*l.* 2s. 4d., and the supply of food to the mines, at reduced prices, caused a sacrifice of 400*l.* Under these circumstances, the directors have thought it necessary to curtail their expenses, as there can be but little doubt that the tenant for life could make any reduction of, or arrangement as to, the amount of royalty to be paid—and his silence after application made by letter, pretty clearly shows that he is disinclined to make the required reduction; and, like Shylock, "will have his bond," although he sees the most awful distress pervading the district, which the company would, to a great extent, relieve, were they left unfettered by heavy dues, so as to extend the working to that degree, of which the property in question is capable. We are, however, glad to see, that the directors have not left the matter here—they have called the attention of the Government to the subject, by a letter to the Hon. H. Labouchere, M.P., Secretary to the Lord Lieutenant, setting forth the scanty provisions of the Act, and praying for an early amendment; and we trust the matter will be brought before the House of Commons at an early day after its meeting. Too much importance cannot be attached to the mines of Ireland, and every facility should be given to enable them to be worked with facility and economy, as a means of employing a large amount of population; and, at the same time, adding considerably to the produce and wealth of the country.

A report of the meeting of the Rhymney Iron Company, for the purpose of considering the propriety of repealing or altering the 13th clause of the Deed of Settlement, which provides that dividends shall be paid an an average of five years' profits, will be found in another column; and, although a difference of opinion prevailed among the proprietors, as to whether the division of each year's profits, after reserving a suitable *rest*, should be annual, or taking an average of years, we are happy to say there was an evident anxiety to concede individual opinions to the majority, to secure that unanimity upon which the best interests of a public company depends. The proposal put forward by the directors, was to alter the objectionable clause from five to three years; and thus, while meeting the motion of Mr. Coles Child about half way, it would satisfy that portion of the shareholders who think with the majority of the directors (and we believe among them are the largest proprietors), that, in a fluctuating business like the iron trade, an average of years should form the basis on which profits should be divided, to equalise the dividends, and prevent the anomaly of a large dividend one year, and, perhaps, nothing the next. Numerically, the advocates of annual division had the advantage, and carried their motion on a show of hands; when a poll was demanded by Mr. Thomas Smith, of Ramsbury, and seconded by Mr. Poynder, both original and very large holders, who supported the directors' proposition. The opposition, however, which this step occasioned, and the inconvenience which would arise from a large body of proprietors refusing to take the new shares, should the triennial average be carried, and the injury such expressed division of sentiment would do the company, induced those gentlemen to withdraw the demand, and they handsomely conceded their opinions to the majority present. With respect to the policy of either measure, much may be said on both sides. During the past 20 years, there has been, perhaps, no branch of commerce (insurance offices not excepted), in which there has been greater fluctuations than in the iron trade; and hence the wisdom of inserting the clause in question, at a period when it could not be even guessed at, whether the coming year would realise a profit, or sustain a loss—but we think now, when the demand for the material is considerably above the supply, when it is known that the great public works alone in hand and projected, render that demand certain for many years to come—that the application of iron to numerous purposes in agriculture, navigation, and domestic use, before unthought of, still adds to the wants; and that, under these circumstances, a company starting without encumbrance, and well-established, as the Rhymney Company is, must, with moderate circumspection, realise handsome returns; we cannot but think there are good grounds for supporting Mr. Coles Child's motion, without any fear of crippling the directors by a want of funds in hand, or of causing any very great irregularity in the amount of dividends paid.

In our last Number we offered some remarks on the meeting of the proprietors of the Treeleigh Mining Company, particularly on the policy of declaring a dividend of 2s. 6d. per share, when, in all probability, in three months, the directors will be in a position to pay 5s. We then observed, that we considered the paying so small a dividend highly objectionable; and we understand our views are those of the directors and the largest shareholders. The directors having communicated with some of the latter in Cornwall, had a meeting as soon as replies were received; and, from the opinions there expressed, and their own previous convictions, they have declined to declare a dividend, considering—and we think, justly—that so paltry a sum would look more like a decoy, than the declaration of a dividend out of substantial profits. We have been informed, however, that their expectations of the success of the mine are up to this time not only unabated, but increased; and they have no doubt of being enabled to declare a dividend of 5s. per share at the quarterly meeting in April next.

The attention of our readers will, doubtless, have been directed to the large returns of silver obtained from the silver-lead ores of Almagrera, on the south-east coast of Spain—the amount produced last month exceeding 30,000*l.*; and it is with much pleasure we learn, that British capital and industry will soon derive a share in the profitable results attendant on operations in that quarter of the globe. From a prospectus which is now before us, we find that a company has been established, with the object of smelting and refining the rich ores of Almagrera on a new and greatly-improved process, both as affects the economy of manufacture, and the purity of the metal, with the aid of powerful machinery and newly-constructed furnaces. We refer to the Iberian Silver-Lead Ore Company, noticed in our advertising columns, who have recently purchased two large smelting establishments in the immediate neighbourhood of the mines and contiguous to the sea shore, where the works will be carried on, we are given to understand, on an extended scale; while one of the principal features which presents itself, as distinguished from mining pursuits, is the freedom of all risk necessarily attached on mining operations—the value of the ore being ascertained by assay, and hence the amount of profit derivable ascertained with certainty. If we may judge from the results of smelting operations nearer home, there can be no question as to the profitable returns, which may be fairly calculated upon, and which, indeed, may be said to be secured; while the field of operations would appear to us to be well chosen. The company have issued 12,000 reserve shares, at a rate which would appear to be insignificant, compared with the advantages held out—the directors holding the subscribers harmless from all further calls buyond the present payment of 12s. 6d. per share, at the same time that they guarantee a dividend of not less than 20 per cent. on the capital, within the next 12 months, although commencing operations only in the spring; and which guarantee will, we understand, remain in force until the whole of the capital shall have been repaid. We shall watch the progress of the company with some interest, and trust that a fair, if not a large proportion of the returns of silver, noticed in our columns from time to time, will find its way to the country through the agency of the Iberian Silver-Lead Ore Company.

Scotch Iron Trade.—The enormous demand for iron at the present time, and particularly the fact that nearly all the makers are most heavily oversold, and are careless about further orders, renders it next to a certainty that capital invested in the make of this metal, in situations where the ore and other materials are on the spot, will obtain a lucrative return. In Scotland, more particularly, there is a wide field for the make of malleable iron, an immense quantity of pig-iron being sent from thence to England, to be manufactured into malleable, and is then exported back to Scotland for consumption. We have before us a prospectus of a company, under the title of the Ayrshire Malleable Iron Company, formed for the establishment of malleable iron-works near Dalry, in Ayrshire, where ironstone of the best quality may be had by railway from numerous iron-works, and by which means of transit communication may be had with numerous shipping ports, and throughout the various towns and populous districts of Scotland. The coal in this part of Ayrshire is most abundant, cheap, and of excellent quality; and thus the company will be in a position to produce malleable iron, at all events so much less in price than the carriage of the ore into Staffordshire, and the finished metal back, than what is now obtained; but, as iron can be manufactured in Scotland for much less than in England, arising from local advantages, a still greater difference will be the result of such establishment, and, probably, realising a return of not less than 20 per cent. on the capital invested. The capital is 200,000*l.*, in 10,000 shares, of 20*l.*; and as, although Lanarkshire and several other districts have malleable iron manufactories, Ayrshire, though so well situated for the trade of the whole kingdom, is at present unsupplied, which will give this company most preponderating advantages, and render the undertaking highly profitable to the proprietors.

Produce of the South American Mines.—However degenerated the mines of Mexico and Brazil may have become in modern times, in their produce of the precious metals, the amount of wealth extracted from them, up to the close of the last century, is truly astounding. The following is an estimate, made in a most careful manner, by Humboldt, from the various registers, and making due allowance for the quantity smuggled away by the contrabandist, without paying state dues:—

The Silver Mines of Mexico—to 1805		£474,135,860
"	New Granada—to 1803	61,875,000
"	Chili—to 1803	31,050,000
"	Peruvian—to 1806	300,555,684
"	Potosi—to 1803	332,183,739
The Gold Mines of Brazil—1695 to 1803		192,375,000
Total produce of the American Mines—to 1806		£1,392,175,289

The mines of Potosi appear alone to keep up any thing like their former character; they are represented as inexhaustible—the only difference being, that the workings, instead of being near the surface, are descended by about 500 steps. The mines of Peru, if again explored, would, probably, still turn out enormous riches; but, since the invasion of the Spaniards, although centuries have elapsed, the native Indians, whose predecessors did all in their power to keep a knowledge of the localities of the precious deposits a secret from foreigners, still possess the same feeling as their forefathers; and it is highly probable that many of the rich mines are completely grown over by brushwood and forest—now lost sight of, and which may, by mere accident, be again discovered; and when localities producing silver are known by the natives, the secret is most religiously kept amongst themselves.

Cape of Good Hope papers announce the opening of a vein of copper at the Orange River Mine.

IRON MANUFACTURE OF SCOTLAND.

[We are indebted to Messrs. P. and H. Ferguson, metal brokers, of Glasgow, for the following particulars respecting the Iron Trade of Scotland. Our Glasgow correspondent, in handing us the document, says—"I have gone very carefully over the details, and my opinion is, that the whole is very correctly drawn up, and may be fully depended upon."]

The accompanying particulars, from unexceptionable sources, exhibit the fluctuations in the price of pig-iron, in this market, during the past year—the stock on hand, Dec. 31, 1846—and the shipments foreign and coastwise, up to this latter date—also, the furnaces in operation, and the works erected and progressing. As compared with 1845, the price has not been so high, nor the fluctuations so great—the extreme difference not exceeding 14s. per ton; while, in 1845, it amounted to 1*l.* 17s. 6d. The average price of both years is very near the same. In the former period, the demand was, for the most part, speculative; in the latter, it was principally for shipment and consumption. The export foreign exceeds that of 1845 by 64,429 tons; the reduction in the stock has, therefore, arisen as much from foreign demand as from an increased local consumption.—Should the same causes continue to prevail, and no material increase, which we think is not probable, take place in the production, a further decrease in the stock may arise. A considerable portion of the present stock has accumulated since Nov. 1, when shipments began to fall off, and the navigation shortly thereafter closed. As it now stands, it is only equal to three months' production; and, in order to give proper facilities in deliveries, the trade would not be well supplied with a much less quantity. With the foregoing materials before them, we leave parties to draw their own conclusions of the future prospects of the trade.

Since the opening of 1847, the price has advanced, and considerable business has been done at 77s. and 77s. 6d.—cash, mixed Nos., and 80s. four months' bill.

PIG-IRON WORKS AND FURNACES IN SCOTLAND.

WORKS IN OPERATION PREVIOUS TO 1846.

Works.	*In Blast.*	*Out.*	*Building.*	*Total.*	*Completed, 1846.*
Cartsherrie	16	0	0	16	0
Dundyvan	8	1	0	9	0
Clyde	5	2	0	7	0
Govan	3	3	0	6	1
Calder	5	3	0	8	0
Langloan	6	0	0	6	3
Carnbroe	3	3	0	6	0
Glengarnock	5	2	0	7	2
Summerlee	5	1	0	6	0
Monkland	8	1	0	9	2
Coltness	5	1	0	6	0
Omoa	3	1	0	4	2
Shotts	3	1	0	4	0
Castlehill	2	0	1	3	0
Blair	2	1	3	6	0
Muirkirk	2	2	0	4	0
Garscube	2	0	0	2	0
Carron	3	2	0	5	0
Devon	2	0	0	2	0
	88	24	4	116	10
WORKS ERECTED IN 1846.					
Forth	4	0	1	5	4
Kinniel	4	0	0	4	4
Lugar	2	0	2	4	2
	10	0	3	13	10
WORKS NOW ERECTING.					
Eglinton	0	0	1	4	3*
Portland	0	0	4	4	0
	0	0	5	8	3
Total furnaces	98	24	12	127	13

SHIPPED FOREIGN, IN 1846.

From Scotland	*Tons* 107,671
„ Ireland	220
„ England	11,219
Total	*Tons* 119,100

Rouen	*Tons* 16508	Brought forward	*Tons* 87080
Dunkirk	7476	Oporto	180
Havre	1718	Lisbon	255
Calais	190	St. Sebastian	220
St. Vallery	873	Bilboa	1338
Nantes	1540	Barcelona	889
Charente	780	Seville	116
Bordeaux	1472	Malaga	50
Cette	220	Gibraltar	80
Marseilles	4410	Cadiz	10
Harfleur	130	Genoa	2599
Abbeville	140	Leghorn	1452
Gijon	120	Naples	672
Amsterdam	1028	Cevitta Vecchia	895
Scheidam	115	Palermo	27
Rotterdam	13918	Messina	50
Dort	15033	Trieste	285
Memel	40	Venice	86
Pillau	158	Galatz	15
Dantzic	240	Egypt	124
Rugenwalde	94	Constantinople	136
Stettin	7269	Quebec and Montreal	6387
Stralsund	15	St. John's	615
Lubec	70	Halifax	100
Leer	245	Pictou	42
Kiel	130	Miramichi	110
Hadersleben	180	P. E. Island	40
Rendsburgh	1028	St. Stephens	10
Hamburgh and Altona	6597	Boston	3187
Bremen	1296	New York	9709
Varel	395	New Orleans	717
Rounebeck	100	Mobile	20
Konigsberg	310	Philadelphia	285
Drontheim	50	Havannah	145
Frederickstadt	50	St. Thomas's	10
Aalborg	209	Jamaica	10
Odense	85	Demerara	5
Frederickwark	633	Bahia	65
Copenhagen	1196	Pernambuco	85
Flensburg	72	Rio de Janeiro	300
Swedenborg	40	Valparaiso	88
Elsineur	40	Sydney	56
Horsens	50	Hong-Kong	25
Stubbekjobing	20	Ceylon	60
Nykjobing	10	Singapore, Manilla, &c.	183
Rudekjobing	25	Calcutta	253
Antwerp	95	Bombay	30
Ghent	130		119100
Brussels	116		
Ostend	164	Coastwise	257851
Jersey	268		
Carried forward	*Tons* 87,080	Total	*Tons* 376,951

COMPARATIVE EXPORTS IN	1846.	1845.
France	*Tons* 35567	10674
Jersey	268	130
Holland	30094	4068
Belgium	505	—
Germany	18167	3743
Denmark, Sweden, and Norway	2480	624
Russia	—	20
Austria	386	182
Turkey and Egypt	260	565
Italy	5695	1795
Spain	2703	212
Portugal	435	198
South America	538	250
West Indies	170	100
New South Wales and India	607	734
British America	7307	5391
United States	13918	25915
Africa	—	70
	119100	54671
Increase in 1846		64429
Total		119100

EXPORTS.

Stock on hand, Dec. 31, 1845	230000
Stock this date, in store and makers' hands	145000
Decrease	85000
Computed make in 1846	580000
Add stock, Dec. 31, 1845	230000
	810000
Exports as above	376951
Stock this date	145000
Local & inland consumption, for all purposes, 1846	288049—810000

FURNACES IN BLAST, 1846.

January, 87—June, 97—September, 94—December, 98.

* Two have just been put in operation.

PRICE—NET CASH, FREE ON BOARD AT GLASGOW.

1845—	£3 0 0	January	£4 0 0—1846
	3 10 0	February	3 17 6
	3 0 0	March	3 10 0
	3 0 0	April	3 6 0
	4 5 0	May	3 10 0
	3 3 0	June	3 8 0
	3 5 0	July	3 10 0
	3 2 6	August	3 15 0
	3 15 0	September	3 13 6
	4 0 0	October	3 9 6
	3 15 0	November	3 9 0
	3 15 0	December	3 12 6
Average	£3 16 0	Average	£3 11 8

THE LONDON COAL TRADE.

The number of ships entered at the coal market in London, by factors, during the year 1846, was as follows:—

Duke and Hill	1918	Clarke and Burgess	252
Harris and Dixon	1261	Milnes and Robinson	243
William Mitcalfe	791	James Morrison	239
Charleton and Watson	624	Smith, Scurfield, and Co.	237
Miller and Potter	572	Carr, Lamb, and Co.	215
H. and J. F. Taylor	489	George Marshall	132
Lambert, Ridley, and Co.	486	Fenwick, Son, and Laroche	121
G. H. and J. T. Wawn	316	Thomas Smith	18
Anthony Harris	310	Total	8492
W. E. Bell	268		

The number of tons of coals, cinders, &c., delivered in London during the year 1846, was as follows:—

Coals	*Tons* 2,082,116	Cinders	*Tons* 25,620
Ditto, per certificate, and without a regular meter	811,048	Culm	3,277
		Ashes	1,113
Total tons	2,923,174		

The delivery of coals only, in 1845 and 1846, was—

In 1845	*Tons* 3,270,678
In 1846	2,893,164
Short delivery in 1846	377,514

The excess of delivery in coals only, on an average of five years, was 93,473 tons. The delivery of coals, December, 1846, was 280,980 tons—being 18,820 short of the delivery in the corresponding period of 1845.

The importation of coals in 1845 and 1846, was as follows:—

In 1845	*Ships* 11,987	*Tons*	3,403,390
In 1846	„ 10,488	„	2,953,755
Decrease in 1846	„ 1,499	„	449,565

But, with the exception of 1845, the importations of 1846 have exceeded those of any preceding year, of which we have any record before us.

In the month of December, 1846, the importations into London were—

Newcastle	*Ships* 233	*Tons* 78,186
Sunderland	148	45,459
Stockton and Hartlepool	142	40,961
Blyth	21	5,085
Scotch	1	210
Welsh	19	5,976
Yorkshire, &c.	26	2,819
Small coal	5	1,445
Cinders	12	2,408
Total	*Ships* 607	*Tons* 183,549
December, 1845	915	274,246
Deficiency	308	91,697

The importations of 1846 were as under:—

Newcastle Main	*Ships* 2302	*Tons* 766,192
Newcastle Wall's End	1435	407,219
Sunderland Main	317	83,687
Sunderland Wall's End	2785	807,375
Stockton and Hartlepool	2347	620,011
Blyth	401	90,792
Scotch	36	4,015
Welsh	364	99,011
Yorkshire	261	25,657
Sundry places	3	211
Small coal	61	16,197
Culm	9	2,664
Cinders	167	30,724
Total	*Ships* 10,488	*Tons* 2,953,755

In November, 1846, the coal received in London, by canal and railway, amounted to 4833 tons—viz.:

By canal	*Tons* 2100
By railway	2733
Total	*Tons* 4833

SMELTING THE SOUTH AUSTRALIAN ORES OF COPPER.—The question is again agitated as to the advantages to be gained by sending the rich copper ores of South Australia to Newcastle (New South Wales), where coal is plentiful; in which it is attempted to show the smelters of England how much it would be to their advantage to establish smelting-works there, instead of having the ores brought 17,000 miles to Swansea, and the metal reconveyed to South Australia and India—the largest market for copper in the world, consuming one-third of the brass and copper manufacture of Great Britain—placed half-way between South Australia and New Zealand, it is stated to hold out advantages superior to any place in the mother country as a smelting depôt. The present freight of ores from Adelaide to Swansea is 4*l.* 10s. per ton; and it, therefore, does not pay to export ores worth less than 15*l.* per ton, and the inferior ores are thus rendered valueless, and will remain dead stock until smelting-houses are erected. Were such erected at Newcastle, a remunerative market would at once be opened for all the ores produced in both colonies, 1300 miles from Adelaide, and 1000 from New Zealand: the voyage could be performed to and fro in about two months, or six in a year—and 15s., or at most 20s. per ton, freight, would cover all expenses; and thus not only effect a saving of four-fifths the present charge, but *create* a value for the inferior ores—besides effecting a large saving in the export of the metal to India. It further states, that the present price charged for coal of excellent quality by the Australian Agricultural Company is 7s., but for smelting purposes on a large scale they might be obtained 2s. per ton less. In opposition to these views, it is argued that the South Australian ores may be far more profitably smelted in South Australia itself, the question being not one of coals only; it being shown that the ores in general are the oxides and carbonates, the Kapunda Mine alone producing the sulphurets—and the former being so much easier to reduce, can be smelted by charcoal, which can, for years to come, be produced from the almost exhaustless forests of the colony. Charcoal may be considered to do the work of three times its weight of ordinary coal; and it is said that it could be supplied from the neighbouring woods for 5d. per bushel, or 2*l.* per ton, and 1 ton would operate on 3 tons of the ores in question. On a comparison of the two proposed methods, assuming that the Newcastle smelters could make their coal available to the fullest extent, that the ores, rich and poor, average 20 per cent., and cost of labour the same in both places, the result is in favour of smelting at home by 3*l.* 7s. per ton, as follows:—

NEWCASTLE (New South Wales).		ADELAIDE (South Australia).	
Freight of 5 tons of ore from Adelaide to Newcastle	£5 0 0	Freight	£0 0 0
Coals, at 7s. per ton	1 15 0	Charcoal	3 8 0
		Balance in favour of Adelaide	3 7 0
Total	£6 15 0	Total	£6 15 0

The writer then proceeds to show, that sending to Swansea adds a charge of 20*l.* per ton on the copper produced, four-fifths of which might be saved, or rather add 16*l.* to the profits, and describes the advantages which would further result from sending the mineral wealth of the colony to distant markets in the most portable and least costly form. Notwithstanding the views which are here very properly taken of the subject, it does not by any means appear that the colonists take so favourable a view of the matter; a subscription list has been some months opened in Adelaide, for the construction of smelting-works, but which proceeds so slowly that it does not appear probable that a company can be formed by such means. The most feasible plan which appears to us, would be for the several mining companies to erect joint smelting-works, where all could send their produce—the cost of the establishment to be paid by each, in proportion to the amount of ore smelted.

BOILER EXPLOSION AND LOSS OF LIFE.—A serious explosion occurred at the Stonefield Iron-Works, on the 19th ult., by which C. H. Perry was so dreadfully scalded, that he died on the 26th. It appeared that the boiler, in many places, was only 1-16th of an inch thick; and, from the evidence of a boilermaker, it appeared to have been unfit for use for 12 months; other evidence, however, contradicted this, and the verdict was "Accidental Death."

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

It appears that the Government proposes to present no new laws for concessions of new railways in the course of the present session. It appears, too, that it proposes to make the concessions accorded last year less onerous to the companies, either by extending the period in which the works are to be executed, or by extending the length of the lease—perhaps, even by advances of money, and, what is the same thing, dispensing the companies for the present with the payment of what they owe to the State. All this is very well in its way; but one of the best, shortest, simplest, and justest measures that could be adopted for the relief of railway companies, would be the abolition of import duty on rails, on coal, on coke, and on locomotives. Let us hope that such a measure will be adopted before long. The advantages of it would be unbounded—and would benefit not only the iron companies, but the Government, and the public also. It alone would almost suffice to raise the shipping interest from its present state of dreadful depression—in fact, the ironmasters would be the only people that could have a word to say against it; but surely their interested wailings might be disregarded, when it is considered that for many years they have fleeced the public of many, many millions, by a most odious monopoly. The King's speech will be before you; but it contains nothing at all that can be considered of peculiar interest to that branch of industry of which you are the organ; nor have the proceedings in the Chambers thus far been of a nature to attract the particular attention of your readers. Yesterday, the Minister of Finance, in presenting certain bills relative to finance, made the startling admission, that the deficiency of the public revenue for 1846, cannot be less than 81,237,963 fr., notwithstanding an increase on the receipts of 33,000,000 fr. On deducting, however, the excess of receipts in 1845, the deficiency will be reduced to 79,305,899 fr. The probable deficiency of 1847 is calculated at 48,890,417 fr.

The *Siecle* has at length published, pursuant to the order of the court, the letter of M. Mertian, of the iron establishment of Montalaire, in reply to the articles of M. Leon Faucher, reproduced in the *Mining Journal*; but the *Siecle* has crammed the worthy ironmasters' epistle into such an out-of-the-way corner among the advertisements, that it was only by accident I saw it. I have had the supreme felicity of wading through the man-of-iron's literary essay, but must avow that it seems to contain nothing but twaddle. The question in dispute between M. Faucher and his iron assailant is, whether the ironmasters of France were, or were not, able to supply the iron required by the Trans-Atlantic Navigation Company, for the building of several steamers. M. Mertian asserts, that the offers made by his establishment to the directors of that company were really serious—but to this it may be answered, that there is a wide difference between the offers of the ironmasters and their performances. Ask any of the tribe to supply you with an unlimited number of millions of tons to pave over the Atlantic, and he will indubitably promise to let you have them within six months. But heaven help your simplicity, if you expect to see the engagement even partially fulfilled—*au contraire*, you will never be able to get, either by gold or fair words, a single ounce of your millions of tons. The ironmasters havn't got the iron, and can't let you have it: there is no getting blood from a stone. But to proceed with M. Mertian's epistle. Some months after the offers referred to were made, he says that the directors of the company sent a circular to all the ironmasters of France, asking if they could supply 2000 tons of sheet-iron, of extraordinary dimensions, within three months; and this, he says, was only to have an excuse to demand to be allowed to import sheet-iron from abroad. What! is the supply, then, of 2000 tons of iron, within three months, so utterly beyond the resources of the ironmasters, that it seems to them ludicrous to demand it? If so, in heaven's name, how can they dare to demand the maintenance of their monopoly? But, says M. Mertian, the directors could not have required the 2000 tons within so short a period as three months, nor even within a year. How does he know that?—and besides, what is that to him? Whether they wanted the iron or not, they were prepared to pay for it on delivery; and, if the ironmasters could not supply it within the period stipulated by the purchasers, they admit themselves that their monopoly is absurd—for what can be more absurd than to deprive a man of the faculty of buying a material out of France that he cannot get in France? As to the extraordinary dimensions of the sheets demanded, let us see what those dimensions were: "the large sheets of 200 kilogrammes cannot be surpassed; therefore, sheets of 65 to 70 centimetres, by 4½ metres, and 17 millimetres, are *inexecutable*." So says M. Mertian. Whether these dimensions are so extraordinary, as to be "inexecutable," I cannot take upon myself to say, but I doubt it very very strongly. Such of your readers as are familiar with this article will be able to state if M. Mertian's assertion be unfounded—as I suspect we have a clear proof that these ironmasters cannot fulfil the most ordinary orders that are sent, and are obliged to invent fibs (I might use a stronger word) to shuffle out of receiving them—but if it be true, why do they clamour against allowing people who require those dimensions obtaining them in England? Their clamour is about as reasonable as it would be for them to protest against silver being brought from Mexico, though they cannot supply it. One word more. M. Mertian says, that in March last, his establishment supplied sheet-iron at 560 fr.; and that, at the date of his letter (29th Oct.), its price, "for important affairs," was 600 fr.—24*l.* a ton seems to me a charmingly modest sum; but would an English establishment demand as much?

From St. Dizier, under date the 7th inst., the intelligence is as follows:—"*Fontes blanches* are firm at 200 fr. the 1000 kil., taken at the furnaces A bargain of 500,000 kil. has just been made at that price. Negotiations for the supply of still larger quantities at the same rate are in progress. Water pipes are at 260 fr. and 265 fr. The prices of *fers* are fluctuating. The *laminés* delivered at St. Dizier vary from 380 fr. to 400 fr. The *fers battus* keep up at 400 fr. for Paris, and 410 fr. for the provinces. Some furnaces receive more orders than they can supply; others get no orders at all." No company presented itself, as I anticipated, with an offer for "the lease of the St. Dizier and Gray Railway. The Government will, consequently, have to make the line. The Caen Railway has been abandoned by the company, and the deposits are being paid back to the shareholders. The new cotton powder has been tried in the Loire coal-pits, and has been proved to possess as much power in 25 grains as ordinary gunpowder in 180. The Loire coal-pit people are slow coaches to have delayed so long in making such a simple experiment.

The Department of Marine notifies that, on the 30th of January, it will receive offers for the supply of 277,800 kil. of sheet-iron of a superior quality, 244,667 kil. red copper, and 83,950 *fers à cornières*, for the port of Brest. On the 13th of February it will receive offers for the supply of 12,000 kils. of tin in pigs for the same port.

I think, from all that I see and hear, that the present year will be one of the most remarkable in mining enterprise that has been witnessed for a long time—if ever witnessed at all—in this country. Railways are quite out of favour, and are every day becoming more so—whilst mining matters are continually exciting more and more attention. It is not improbable that we may see this year, on however a smaller scale, enthusiasm as intense for mines as was last year witnessed for railways. One striking proof of how strongly the tide of popular favour has turned towards mining enterprise is afforded by the fact, that the *Journal des Chemins de Fer*, which for years has been exclusively devoted to railways, has deemed it advisable to take for the future the title of *Mining Journal*, in addition to its old title, and to promise to pay great attention to mining matters.

RAILWAY COLLEGE IN PARIS.—M. Dumont, the Minister of Public Works, has just established a regular course of lectures on the construction of railways, the scientific erection of locomotive engines, with other machinery and material requisite for railway purposes. These lectures will be given at the Royal School of Mines, and will render engineering students well qualified for the various branches of this new and all-important science. M. Dumont, when in this country, paid particular attention to the details of our railway works, and intends, it is said, during the present session, to bring forward a project before the Chambers, for building a college for properly educating young men intended for locomotive engineers and stokers, who, on the completion of their studies, will have a diploma, or certificate, granted to them, specifying their competency; and all railway companies, requiring the services of well-qualified men, will make their application to the directors of the college. For the acquirement of real practical knowledge the Minister has made arrangements with the different companies, that the students shall have every facility afforded them of practising on the powers and speed of locomotives for short distances, and thus render them theoretically and practically acquainted with the subject.

ON THE SILVER AND GOLD MINES OF THE NEW WORLD.

M. Michel Chevalier, the well-known engineer and political writer, has just published, in the *Revue des Deux Mondes*, an article on the silver and gold mines of the New World, of which the following is a translation. In a note, M. Chevalier says that he wishes it to be understood that, in the article, he has profitted, "in addition to his personal observations, not only by the profound researches of M. de Humboldt, the result of which is contained in the *Essai Politique sur la Nouvelle Espagne*, in *L'Asie Centrale*, and in the *Histoire de la Geographie du Nouveau Continent*, but also by the studies of M. Saint-Clair Duport, remarkable with regard to both the sciences of metallurgy and political economy, which are found in his work, entitled *Production des Metaux Precieux au Mexique*." He adds, that "the volume of M. Duport is this day the most concise work that exists on the working and the future prospects of the mines of Mexico—M. Duport, a Frenchman long resident in that country, having taken an active part in the working of Mexican mines, and thereby obtained a knowledge thereof unequalled by that of any other person."

1. Mexico. General Observations on the Riches of the Mines.

Real del Monte.—I date these notes from the town where I originally began to collect them, which I call *Real* del Monte,* although the law this day calls it *Mineral* del Monte;† but the primitive name is the only one that is used. Real del Monte is one of the most celebrated silver mines of the New World. In certain years there were extracted from it masses of silver, comparable to those which were obtained from Potosi, or La Valenciana, or Pasco—although the English company, which works it at this moment, gives no very favourable account of its present wealth. It became famous by the generosity of the proprietor, the Comte de Regla, who presented to Charles III. two vessels of war, one of which was of 112 cannons, and who joined thereto a *loan* (under the circumstances, this word was a piece of Castilian politeness) of more than five millions. The metallurgic establishment of Regla, 20 kilometres from this place, where the ore extracted from Real del Monte is treated, was built by the same proprietor, with a royal magnificence worthy of the site in which it is situated. A pretty rivulet passes along a mass of black marble, the regular prisms of which arise on the right and left *en faisceaux*. It flows in a cascade from this colonnade to a spacious basin, on the ground of which the metallurgic establishment is erected. The Comte de Regla spared nothing to render this establishment vast and beautiful—vast, because it was his interest—beautiful, because it was his taste. A charming church stands there—its white tower and glittering dome rising above the great paved area (*patio*) in which takes place the amalgamation,‡ and the triple row in hard stone (*arrastras*), in which the ore, previously broken into grains by means of a *bocard*, is reduced into an impalpable powder by the rotation of a block of porphyry, or black marble.

Real del Monte is higher than Mexico by 500 metres.§ To go to Mexico, you pass under the walls of the convent of Guadalupe, situated at the distance of a league from the capital, which the piety of the faithful has filled with splendid donations. It communicates with Mexico by a causeway in a straight line, on which are elevated, at certain distances, monumental arches. It is under the in vocation of the Virgin; and *Nuestra Senora de Guadalupe* was regarded, during the wars of the Independence, as the protectress of the Mexicans against the Spaniards. After having saluted the enamelled domes of the convent, which glitter in the sun, and given a thought to the legends relative thereto, we pass by the Lake of Tezcuco—the largest of the five sheets of water which occupy, placed in ranks, the bottom of the valley.‖ In this season more than in any other, dried up and impregnated with the saline substances which arise, the banks of the lake, so fertile, so laughing, so full of life at other times, resemble a desolate land. On the side on which I saw them, there was not a tree to shelter them. Enemies of vegetation, the Spaniards have without remorse cut everything, without replanting anything, both in the valley and on the mountains which encircle it. The surface of the five lakes is solitary, silent, and inanimated; not a steam-boat traverses it, beating the water with its noisy wings, and throwing behind it a long train of smoke, which indicates from afar the presence of active and bustling men. I did not even see a single canoe, such as furrowed it by thousands in the time of Montezuma, and which Cortez attacked with a fleet of great brigantines, which he had to construct; and, naturally, there was not the slightest trace of the *chinampas*, or floating gardens, on which were cultivated flowers and fruits, and which astonished the Spanish conquerors.

The Lake of Tezcuco has even ceased to bathe the capital, whose streets were formerly traversed by its waters, since the general level of the lakes has been lowered in the valley by the effect of draining, unhappily separated from the idea of watering which the Spaniards ought to have possessed, both on account of the canals executed by the Moors in the Peninsula, which still possesses them, and from having before their eyes the remains of the magnificent waterings of the Azteques sovereigns. On its uncultivated banks one would fancy oneself in a desert, if there were not perceived at the extremity of the horizon, on the other side of the lake, the *haciendas* (farms), which appear fine, and which are surrounded with trees that escaped destruction. We admire afterwards the gigantic causeway, constructed by the Spaniards to enclose the lake of San Cristobal, and to prevent it from throwing itself into the Lake of Tezcuco, which would expose the capital to an inundation. We traverse a small number of villages, assemblages, tolerably regular, of huts of bricks, baked in the sun like those of Egypt, peopled by peaceable Indians, intermixed with some *mêtes*, and some white men, who would be less respectful to the traveller, if he did not let them see his long pistols, which he ought never to be without. The second day you are out of the valley, in the midst of the mountains. We then traverse the little valley of Pachuca, centre of the mining district to which Real del Monte belongs, and celebrated in the history of Mexican metallurgy.

Mines of gold and silver have constantly exercised a powerful influence on people who abandon themselves to their imaginations. Men of this temperament are inclined to believe that a mine of gold or silver is a fortune that can never be exhausted. This is only an illusion; and yet the miseries relative to mines of gold and silver is one of those which cannot be dissipated. There will always be men, who, yielding to one of the strongest inclinations of the human heart, will never court, as regards gold and silver mines, other than those who have made therein immense fortunes. The allurement of mysterious and undefined wealth, such as that enclosed in the womb of a mine of precious metal, will always attract the human heart; and we must not complain of the powerfulness of this allurement. From the apologue of the labourer and his children, up to the gravest events of history, a thousand facts prove that the pursuit of mysterious wealth has very often turned to the profit of human kind. Assuredly Spanish and Portuguese America, and even a great part of English America, have only been colonised because thousands of Europeans hurried, from one bank of the Atlantic to the other, to seek after gold and silver. No where, it must be said, was the bait so tempting as in Mexico—no where, in fact, do there exist mines of silver more numerous or more rich. I do not say that everybody enriched himself there. It is true that the mine of *La Purissima*, at Catorce, has regularly yielded, during a long succession of years, a nett profit of at least 40,000*l.*, and sometimes of 200,000*l.*, or 240,000*l.*; in the same district, the mine of *Padre Flores* yielded the first year 320,000*l.*; the *Valencia*, near Guanaxuato, yielded during more than 40 years a gross annual produce of 560,000*l.*, and a clear annual profit of 80,000*l.*, or 120,000*l.*, and sometimes double; the vein of *Pabellon*, and of *La Veta Negra*, at Sombrerete, has yielded to the Fagoaga family a nett profit of more than 800,000*l.* in the space of five or six months. In this district there was found *red silver* (a combination with antimony and sulphur), forming an entire mass of veins of more than a *metre* in thickness. Nevertheless, if colossal fortunes have been obtained from the mines of Mexico, they have been very few. If the family Fagoaga, the Comtes de Regla, de Valenciana, and some others, owe to them a prodigious opulence, English capitalists, who have placed therein, perhaps, more than 6,000,000*l.* since the Independence, are far from being satisfied, and even for the fortunate themselves, what reverses; after days of prosperity, of which it was hoped the end would never be seen.

The uncertain results, which, in all countries of the world, exists in the working for the precious metals, are found here, where, however, the beds are more regular, but where people are accustomed to spend for sinking a mine incredible sums, and where, under the colonial *regime* at least, the successful miners gave themselves up to prodigalities worthy of the patricians of Rome, under the Cæsars, or of gamblers, of all times and of all countries, when fortune has smiled upon them. The history of the French miner, Laborde, is an example of these vicissitudes. This man, enterprising and bold, arrived poor in Mexico, became exceedingly rich in working a mine at Tlapajahua. He went from there to the mines of Tasco, where he employed extraordinary activity, and from which he drew new profits. This was from 1752 to 1760. In his ostentatious opulence, he built at Tasco a parish church, which cost him 80,000*l.*, and which he ornamented magnificently; but, the mines becoming poor, he persevered, and lost all he had. Reduced to misery, he went to the archbishop, and asked his permission to take a golden sun, enriched with diamonds, with which he had ornamented the tabernacle of his church. The prelate had the good sense to consent. With the 100,000 piastres thereby obtained, Laborde determined to try his chance elsewhere. He went to Zacatecas, where the mines, after having been very profitable, were almost abandoned. He undertook the draining of the waters from a famous inundated mine, that of Quebradilla, and there spent, without success, almost all that he possessed. When there remained in his hands only a few thousand piastres, he risked a mine on the indication of an unknown vein; and he had the incredible good fortune to pitch upon the *Veta Grande*, which is, even to this day, the principal vein of Zacatecas. Doubly fortunate, he fell precisely on one of the points at which the veins offer treasures, called by the Mexicans *bonanzas*, and by the Peruvian *boyas*. He once more gained immense riches. At his death, however, he only left 120,000*l.*, which at that time was very little for a fortunate miner.

[*To be continued in next week's Mining Journal.*]

* *Real* (royal) was the word used to indicate a cluster of mines.

† In Mexico, according to the usage adopted in France during the revolution, it was believed that the remembrance of royalty would be effaced from people's minds by changing the names of towns and of objects that recalled its name. Puente del Rey, for example, at the separation of the warm region (Tierra Caliente) from the temperate region (Tierra Templada), on the road from Vera Cruz to Mexico, has taken the name *Puente Nacional*. The republicans of the United States acted differently. They have retained the name of William and Mary College (called after William of Orange and his queen), of Prince Edward's County, Prince George's County, the Queen's County, the King's County, with King-street and Queen-street; and Georgia did not think it necessary to change its name when it rebelled against King George, like the other provinces of America, and became independant.

‡ It is known that the name of *amalgame* signifies the combinations of mercury with other metals. The amalgamation indicates in this place the operation, which will be described hereafter, by which the silver contained in the ore is absorbed by the mercury.

§ Mexico is 2277 metres above the sea, and Real del Monte 2781 metres.

‖ The superfices of the lake is a tenth of that of the whole valley.

Original Correspondence.

VENTILATION OF COAL MINES.

Sir,—I beg to state, in reference to Mr. B. Gibbons's common-sense plan for ventilation, that I consider that gentleman the most intelligent ironmaster we possess—his plans are always stamped with a sterling character of practical ingenuity. He is the first, and, I believe, the only man who clearly pointed out the *action* of the blast furnace, and deduced the proper form of that important structure. I found his pamphlet, two years since, in a house where it appeared not much appreciated, and seized his ideas with avidity, as throwing light upon many failures. I built a blast-furnace, as far as I could, upon his principles, under much obloquy, and I have found a proof of their truth; for it has withstood, through six months, a degree of torture, misusage, and ill management, that would have set fast 10 furnaces of the ordinary construction. I agree that energetic action, not imbecile outcry, is the true relief for our difficulties—intelligence never quarrels with its tools. It is the pointed persevering use of the means present, which marks the successful man. Be assured, if Mr. Gibbons has taken up the subject of ventilation, we are in the right hands. Might not "Carbonarius" apply a circular saw, moved by some simple form of lathe, to his economical process—a drill bow, working on the vertical axis of the saw, would be a very simple means.—D. Mushet, Jun.

Gloucester, Jan. 12.

CENTRAL HEAT.

Sir,—I have read Dr. Murray's remarks on central heat, with the attention his learning and expefience demand. I agree on the prematurity of geologistic speculations, especially of the Atheist school. I agree also, that volcanoes are not a proof of the internal fusion—they may be connected with an unfathomable lake of fire, or may be mere superficial exhalations. The latter is, for the reason assigned, fully as probable as the former. The presence of sulphur in their neighbourhood *may* point to local peculiarities as their origin: decomposition of water, which, in European volcanoes, at least is present, may do much; and we little know what, in certain places, may exist to produce certain unions. The very late discovery, that vegetable matters acquire, when steeped in a combination of the elements of our atmosphere, an explosive force, must extort a pause, to ask what other things there are in heaven and earth we have not dreamed of in our philosophy? The increase of heat in mines, increasing with the depth, may not be conclusive; yet must be admitted as a strong presumption. Yet, to the extent of our limited perforations, it may be said, surface evaporation and atmospheric change cause the difference between our temperature and that of confined profundities, where the mass of anti-frigorific increases with that depth. There may on these points be a balanced opinion; but I should like to call attention to a point stated by your correspondent of the 14th of November, and hear what can be advanced against it. I refer to the striking thought, that intense cold would, if we were devoid of heat, except what the sun supplies, render the globe uninhabitable. Is it possible to escape that argument? The notion of a globe of 4000 miles radius, travelling through space with nothing to cheer its vertex, but glimpses of occasional sunshine, is anything but a warm conception. I feel a shiver at the prospect. Central heat is joined with a pre-Adamitic theory; but is this necessary? At the moment of creation, when each globe was launched into its orbit, such provision for our comfort may, with other *appearances* of pre-existence, have been made on the instant by the Almighty fiat. Neither does the assumption of internal caloric imply, as some would have it, a fire that can be smothered. The nature, place, and cause of electricity, is mysterious. In all its developments and names, its source is veiled and incomprehensible; the mind swells into ideas gradually sublime, when contemplating the links which these may prove with infinite radiance and eternal power—"Holy light, offspring first-born." In electricity we know not what we see, or what we feel. The revolution of the earth cannot be *without effect*; and it is a plain question, how electric currents are connected with it. What can then be said respecting the *absence of heat*—a term convertible with the *presence of cold* in a sphere of 8000 miles. The ancient proof, from its oblate spheroidity, is hardly irrefragable that the pristine earth was fluid—because, so far as we know its texture, it is sufficiently mobile to have taken that characteristic form; and there are geologic appearances which may have been occasioned by it.—David Mushet, Jun.

Gloucester, Jan. 11.

COALS AND CHALK.

Sir,—I am certainly surprised to see it stated, that coals have been mixed with *chalk*, and used as fuel. Assuredly, the experiment is a hazardous one. The perils arising from the carbonic acid gas, evolved from the lime-kiln, it might be presumed, would have awakened suspicion as to the consequences of the insane proposition. With coals yielding flame, no doubt, much of the carbonic acid gas displaced would ascend the chimney; but a considerable proportional would deteriorate the atmosphere around, and act on the brain as a narcotic poison; and in the case of an imperfect ventilation, the experiment is a most perilous one, and, in every view of the case, it cannot be too severely reprobated. J. Murray.

Portland-place, Hull, Jan. 14.

THE POTATO DISEASE.

Sir,—I fancy that the peculiar effects, observable in reference to the potato crops, cultivated in the vicinity of smelting furnaces, where the disease seems to have been arrested or prevented, are mainly, if not entirely, attributable to the disengaged *arsenic* (arsenious acid), and that the sulphur, and other concomitants, have "neither part, nor lot," in the matter. It is a curious and interesting fact, as connected remotely with the subject of the present inquiry, that, prior to the introduction of quinine, "Fowler's solution of arsenic," the arsenite of potassa, called commonly "the tasteless ague drops," was the only remedy in intermittents, such as those occasioned by the *malaria* of a humid atmosphere in marshy districts, or fenny regions. Moreover, seed wheat is steeped in solutions of arsenic, prior to being sown, in order to prevent the parasitic cryptogamic attack, called "smut," "rust," &c. These facts corroborate and strengthen the opinion that I have invariably maintained—that the potato disease is *epidemic*, aggravated by endemic, or local circumstances. It becomes, therefore, a very curious and deeply interesting question, how far dipping the potato sets, previous to their being planted, in an arsenical solution, or one of sulphate of copper (called commonly "blue stone"), would suspend the disease—experimentum fiat. No trace of the *arsenic*, employed as a wheat steep, can be found in the plant; but there is evidence of its absorption in the case of copper. This view of the case did not occur to me in time to test it in my autumn-planted potatoes; but I shall certainly make the experiment in spring.—J. Murray: *Portland-place, Hull, Jan.* 14.

THE ELECTRIC TELEGRAPH.

Sir,—The other day, having seen a model of the electric telegraph, as used on the railways, I was struck with the complicated and tedious manner of its working. It occurred to me, that to a single wire communication an apparatus might be attached, by which an easy and rapid system of composing words might be formed, which would indicate the succession of letters required, nearly as quickly as they could be written down. My plan is this—let there be a light brass wheel of about 12 of 14 inches diameter, with a face of 1 inch broad at its outer circumference, divided into 36 spaces, on which engrave the letters of the alphabet, and the figures of arithmetic, each space to contain one letter or figure; this wheel or dial to be lightly hung, and made to revolve by spring or weight, with an equalised motion; on the back of the wheel, and near to the edge, a light catch will fall into a notch placed opposite to the middle of each space, which would hold the wheel fixed. When required to work, the magnet would lift the catch, and the wheel being set at liberty, would revolve till the space, containing the letter or figure required, arrived at a fixed pointer, when the catch would be allowed to fall, the wheel fixed, and the letter written down, and a repetition in this manner for the different letters of the word, at the end of which a short pause might be allowed. Or, in place of the above, a short pendulum, which by its motion would turn an index, which could be stopped by the magnet at the required letter or figure. Either of the above methods would effectually give a rapid, simple, and certain communication by the single wire, the only work of which being to lift and drop a catch.—Richard Curtis: *Edinburgh, Jan.* 13.

MAGNETIC IRON ORE.

Sir,—Would you allow me to inquire, through your columns, whether magnetic iron ore can be obtained in Great Britain—and if so, where? The answering this by any of your correspondents would oblige—T. G.

Manchester, Jan. 11.

ON THE WELSH MODES OF WORKING COAL.

Sir,—I see Mr. Deakin has again appeared in the field as the champion of the methods of working which I condemn. Passing over the personal parts of his letter, where he makes me *sorry*, because I am convicted of errors, and assumes my explanations to be a *gloss*, to cover those errors, as uncalled for and unnecessary, I merely notice his communication, to ask him why he confines himself to a consideration of the minor details of my plan, without closing with the principal proposition—viz.: whether it is better to work the coal on the line of bearing, or on the line of direction? Let Mr. Deakin attend to this, and afterwards the minutiæ of the theory can be easily settled. I thank Mr. Deakin for his offer, and may, probably, avail myself of it.—F. B.: *Jan.* 11.

IMPROVEMENTS IN WORKING COLLIERIES.

Sir,—I have just read a sort of reply to my former letter to you by Dr. Murray, which, in its way, amused me. I must confess that I never heard of the recommendation of Dr. Murray for *devising*, not for *using*, a talc shield, to render Davy's lamp "safe under circumstances;" nor do I know of any person in the north of England who heretofore knew anything of this mighty affair; nor does Dr. Murray state that he ever entered a coal mine infested by fire-damp with this *ægis*, to render the Davy a compunctive safety lamp. I confess that I am not imbued with the *cacoethes scribendi*; but when needful I have used my pen, and hope to do so again, when the cause of humanity may be the subject of discussion. Dr. Murray states that the shield of Davy, according to Buddle, was semi-circular and opaque—this is an error. Davy recommended a shield which formed only a segment of a circle. Dr. Murray also informs your readers, that your correspondent, who signs himself "T. R. Torbock," himself seems to flounder in a cloud of his own creation, confounding talc with mica. Now, "Muscovy glass is mica, not talc;" when I transmitted to you, Sir, my observations in respect to Dr. Murray's lucubrations, I was as well aware of all particulars upon this point, as he or any other man may be.

In our mining district, we very frequently hear persons talk and write concerning talc, by which we understand the scientific word mica, and also Muscovy glass, or *glacies mariæ*, which comes to us not from Muscovy, but from Siberia. A sinking man will catch at a straw—and hence this very learned and very sensible dissertation, which is totally gratuitous. Another courteous remark must not be passed over; for, in the expression of Dr. Murray, there stands before an enlightened public the following observation:—"Muscovy glass, or mica, is, no doubt, found as transparent as *the best kinds of window glass*, and, moreover, such specimens are not *uncommon*." For my part, I have met with very few specimens as transparent as window glass; but grant that such may perchance be found, still we must consider them exceptions. Will Dr. Murray tell the community, that, as the Davy affords a most miserable light, we must be compelled to add to its *insignificance* an additional concentric cylinder of a mineral as opaque as our window glass? As I stated in my communication, the light of the Davy is so insignificant, that many pitmen rather prefer running the risk of life and limb than be trifled with such "a glow worm at the bottom of a well." As to the sneer of Dr. Murray, that I took up my pen in ignorance, I will fearlessly tell him, that I know the subject as well, if not better, than he does. I am no Jonathan Dawplucker, and have never assumed anything but what was justly due to me. I am no *safety lamp projector*. I boast of nothing but truth, and which I can maintain; and whether Dr. Murray may be inclined to "decline any notice in future of animadversions such as these," is a matter of perfect indifference to me. One thing I will mention—viz.: that my education, as a man of science, is at least equal to that of Dr. Murray. Before I conclude, I will ask Dr. Murray, what we, as men of science, are to understand by his notable words, as in his last communication, "will not intercept a particle of light?" Is this the language of a man pretending to science? Is light a part and parcel? Other persons use the words ray, and rays of light; *great men, truly, coin new words.*—T. R. Torbock: *Kirby Stephen, Jan.* 11.

ON THE WELSH MODES OF GETTING COAL.

Sir,—On reviewing the letters of your correspondent, "F. B.," on the Welsh method of getting coal, and the replies which those letters have provoked, I am induced (by your permission) to offer a few remarks on the same subject. The method propounded by "F. B." is a modification of the system pursued in this district, and, as regards ventilation, quite superior to the long wall and post and stall systems. I consider Mr. Deakin's letter of the 8th Dec., of considerable importance, because it is from the pen of a practical man, which practice extends over a period of "more than half a century;" from such a source we naturally expect to derive some information on the important subject of ventilation of mines. The passages in Mr. Deakin's letter, to which I would beg to call your more immediate attention, are—"Nor could he ("F. B."), by any possibility, get these cross-headings up to the rise in a fiery colliery, without cross-cutting the 14 yard walls between them to air them. I have work on hand now which would require cross-cutting two, or, probably, three times in the distance of 70 yards." Allow me to ask, do these remarks apply simply to "F. B.'s" system as an isolated case, or to a system general throughout the Welsh coal-field? I should be sorry to prejudice the case, by assuming anything which cannot be borne out by fact—my object being to elicit truth, and to endeavour to establish a better order of things; I shall, therefore, reserve some of my remarks, with a hope that Mr. Deakin, or some other of your talented correspondents, will answer my question. There can, however, be no doubt but Mr. Deakin has stated a fact in regard to his own case; and if he has followed a system for more than half a century, which prevents him from driving a cross heading 70 yards to the rise in a fiery colliery, without cross-cutting it two or three times, the sooner he abandons such a system the better—such a system betrays not only a want of economy, but of intelligence too.

In a letter, dated December 30th, Mr. Deakin says:—"I have seen, and see daily, headings going to the rise that cannot be worked safely 15 yards beyond the air ways." Now, Sir, the only inference which I can draw from these quotations is, that the ventilation of the mines in question is miserably defective in principle, and very far behind the intelligence of the times. To satisfy Mr. Deakin, or others whom it may concern, that what I have advanced is not merely speculative theory, I am prepared at any time, with proper ventilation, to drive a *cross-heading*, or any other kind of *heading*, to the rise, in one or any of the *most fiery* pits of the dis-

trict of which he speaks, not only to the distance of 70 yards, but to that of 100 yards, without *once* cross-cutting it; and that, too, at less expense by 20 or 30 per cent. than he will drive it by cross-cutting. This may be thought a bold assertion; but I have made it with a full knowledge of its practicability. But be it remembered, that I would not undertake the task upon any *other condition* than that I be allowed to have the entire management of the ventilation. The primary object in working fiery seams of coal should be to establish an efficient system of ventilation. That once accomplished, observation and intelligence, accompanied by practical skill, with a due regard to local circumstances, will readily devise the easiest and most economical mode of getting the coal.—W. Stobey: *Benham, Gateshead, Tyne, Jan.* 12.

IMPROVEMENTS IN RAILWAY CONSTRUCTION.

Sir,—For some time past I have been a silent, but not a careless, observer of what has been written and done in railway affairs. I have seen that like causes have, according to the universal experience of mankind, produced like effects—that trains have occasionally run off the rails, producing the wonted disastrous results—and I have naturally concluded that similar results must necessarily arise hereafter, unless their causes shall be altogether and effectually removed. Engineering care and skill have, doubtless, done much to increase the safety of railways, but the radical defect in the connection between the wheels and the rails remains untouched; and it is vain to expect perfect safety until this defect shall have been corrected, and a safe junction, incapable of displacement, substituted for a joint susceptible of dislocation from causes, often, it seems, too occult to admit of explanation, even after the most careful and scientific investigation. To me it appears marvellous that the true inherent causes of mischief in these cases should so entirely have escaped observation in the search after truth; and my original position is thereby confirmed, that a round rail is the only one which can supply all the requisitions of a safe running joint, in connection with the wheels of the engine and carriages. But I must not permit myself to be drawn into the vortex of arguments which have been so frequently and ably laid before your readers from the pens of many writers—nor should I request your permission to occupy a short space in your columns at this time, had not my attention been excited, by the account of a new railway from Paris to Sceaux, on which a succession of abrupt and rapid curves is traversed in safety, by an arrangement of the wheels, somewhat corresponding in design and effect with that proposed by the patentee of the Geometrical System of constructing railways. The inventor, M. Arnoux, has been more fortunate than Mr. Greenhow, in as far as he has succeeded in obtaining a *trial* of his plans, which has not yet been accorded to the latter gentleman, though the principles he advocates comprise *all* and *much* more than has been effected in the French line; and, if fairly carried out, would, with equal safety, carry the train along a line of similar curves, not at the rate of 18, or even *thirty-seven*, miles, but with a speed equal to 70 or 100 miles an hour—and this, too, with a degree of economy hitherto unknown. The superior strength of hollow cylindrical rails has been proved by the experiments—conducted, it is true, with a different object, but not less valuable on that account—of two gentlemen of undoubted practical skill and judgment. Sound theory and experiment have equally shown, that the passage of the wheels over their surface is attended with greatly lessened resistance, to such an extent, indeed, that it may be certainly assumed, that *an engine of half the ordinary weight and power* would perform the same degree of work more quickly, more safely, and, in many ways, more economically. While the railway of M. Arnoux is in successful operation in France, effecting its quantum of safety and economy, surely a feeling of national honour, and noble scientific rivalry, will not permit a scheme of yet larger promise, comprising, as it does, all that has been effected by M. Arnoux, and carrying out the same intentions to a fuller extent, in connection with others of even greater and more vital importance, to remain untried and unexecuted in England. On a former occasion, I appealed to the "generous candour" of the civil engineers of Great Britain—I would now, in repeating that appeal, join to it a feeling of national pride and justice, as additional inducements to lend their assistance to Mr. Greenhow, with an earnest desire to secure its success in bringing into effective (experimental if they will) operations the mechanical arrangements he advocates for securing to the travelling public increased safety, speed, and economy.

Jan. 12. Geometricus.

MINING IN AUSTRALIA—DISTRESS IN IRELAND.

Sir,—Having seen, in recent Numbers of your valuable Journal, very flattering accounts of the mines in Australia, and that there is a great demand for miners and labourers, I have taken the liberty of asking you, or some of your numerous and intelligent correspondents, if a free passage could be obtained for some of our starving fellow-creatures, hundreds and thousands of whom are dying daily in this country from *starvation?*—men, who a few days ago were in full vigour, health, and strength, are now reduced to mere skeletons; and such is the misery and extreme destitution to which they are reduced, that when employment on the public works is afforded them, they are unable to perform it—and numbers who stagger out in the morning to the roads and other works now being carried on, drop dead from exhaustion, and are deposited in their last home, without even a coffin!—the *living* are *literally starved*, and the *dead* buried like *dogs!* Such is the state of this country. Having stated these melancholy facts, I shall feel very thankful to be informed, through your Journal, if there is a prospect of any of the people being sent free of expense to Australia.

West Carberry, Jan. 9. A Miner.

SOUTH AUSTRALIA—USEFUL TO INTENDING EMIGRANTS.

We gather, from the last arrivals, the following particulars of the pay and present position of the several descriptions of labour in the colony:—

Miners.—Many of those who have been working on "tribute," have been earning largely; but it must be borne in mind, that, in commencing new concerns, no inconsiderable amount of exposure, discomfort, and extra expenses have been encountered by miners and labourers, which have well entitled them to high wages and other encouragement. Some miners who are employed at day-work, within about 12 or 14 miles of Adelaide, and can visit their homes, are content to accept temporary weekly employment at 42s., out of which they allow 7s. for an abundant supply of food at the scene of their respective labours, where a man-cook is employed, to whom each miner allows 1s. per week. Good miners, who are also "bushmen," and can put up with tent or tarpaulin accomodation, and a field bed, with a tea-tree mattrass, find a choice of employers, a variety of chanches of making extra money, and are nothing loth to give a liberal share to Barleycorn and Boniface.

Tin-plate Workers are fully employed at 30s. per week.

The Machinists are represented as exceedingly clever, as proved by the variety of agricultural and harvest machines and farming implements produced during several successive seasons, all vying with machines of British production, and some (the "harvest," or, as they are commonly called, "reaping machines") especially, surpassing anything produced elsewhere; so that we need scarcely remark, inferior hands are not wanted, and the extent of the community would not warrant anything like a general invitation to able machinists.

Masons, who are good "wallers," earn 5s. to 6s. per day, or at the rate of 5s. 6d. to 2s. per yard.

Engineers, Founders, and Turners, are in general fully employed, and, we believe, well paid; although it is difficult to define any scale of remuneration, where employment is of so miscellaneous a character, that artisans who expect to do well ought to be able to turn their hands to anything within the compass of the branches professed.

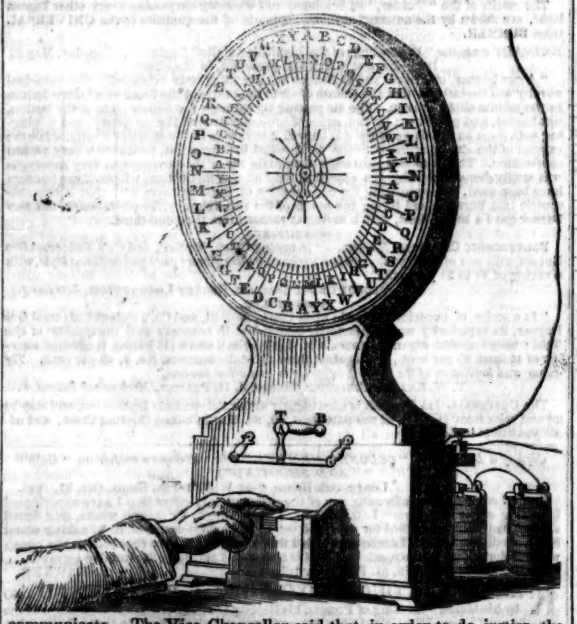
New Iron Works at Clyne, near Swansea.—We understand from good authority that a company of wealthy ironmasters have taken a lease from his Grace the Duke of Beaufort of an extensive track of iron and coal property at Clyne, and purpose immediately erecting furnaces on the bank of the Blackpill river, half-way between this town and Oystermouth. This, we doubt not, is but the commencement of what must result from the introduction of railways, and the consequent development of the vast mineral resources of our district.—*Cambrian.*

How to Prevent Iron from Rusting.—Zeni recommends, for this purpose, 80 parts of pounded and very finely sifted brick-dust, which is to be mixed with 20 parts of litharge. The mixture is ground upon a slab with linseed oil to a thick past, and diluted with oil of turpentine. Before use, the iron, even when it is new, should be rubbed quite clean. M. Zeni asserts that iron, which had been twice painted with this, and exposed for some time daily to the action of the sea, had remained entirely free from rust.—*Chemical Gazette.*

Fearful Wounds from Erysipelas Cured by Holloway's Ointment and Pills.—Mr. A. Coles, formerly in the employ of Mr. Oliver, coachmaker, Twickenham, for five years, had been ill, off and on, for 14 years, and for the last seven he was continually under the care of one surgeon or the other, besides being a patient for a considerable time at one of the hospitals, for settled erysipelas in both legs, which discharged a quantity of water, besides humours issuing from several large wounds. His age being 71, it was expected that the complaint would kill him; and yet this poor man has been perfectly cured in six weeks by Holloway's ointment and pills. Sold by all medicine venders, and at Professor Holloway's establishment, 244, Strand, London.

Drainage of the Lake of Haarlem.—In a former Number we gave a detailed notice of the giant steam-engine and buildings erected for the drainage of the Lake of Haarlem, in Holland, and the benefits likely to be derived by the population of that district from the drying up of the lake—not only in a salubrious point of view, but for the security of the surrounding country, which too frequently becomes overflown by its waters. The trial of the engine, called the *Leeghwater*, has been made, and proved highly successful—working with great regularity; the 11 pumps raising, at each stroke of the piston, a body of water of 66 cubic metres, or 200 cubic feet. Although the engine, each time it raised the water, was put to a strain of 400,000 lbs., there was scarcely any shock in the building, and the only noise heard was the running of the water from the pumps. The number of strokes of the piston was about seven a minute, the water elevated 5 feet, and the pressure of steam in the boiler was from 30 to 35 lbs. Should it be necessary, in the drainage of the lake, to raise the water from a greater depth, it could be safely increased to a pressure of 70 lbs., and by this means the playing of the pumps could also be augmented. This monster engine is capable of raising 1360 cubic feet per minute, or upwards of 1,944,000 feet within the 24 hours, with a power equal to 300 horses. However great the consumption of coal to obtain so high a power, the expense diminishes in proportion to the time of working. By this first essay, it has been ascertained that it only requires 4 lbs. of coal per hour to obtain one horse-power—whilst the old engine used at Zuidplay, required 14 lbs. for the same. Notwithstanding the great economy observed, the engine, however, requires 200 bushels, or 11,632 lbs. of coal to work it. When it has been put in full power, this quantity is expected to be materially reduced; and the population are highly delighted at seeing the lake likely no longer to class among the waters of Holland. The engine is considered by scientific men of all countries to be one of the finest specimens of steam power for hydraulic purposes and drainage hitherto invented by the ingenuity of man.

The Electric Telegraph.—In the *Mining Journal* of the 2d inst., we gave a description, with a diagram, of Gamble and Nott's patent electric telegraph; and our readers, perhaps, are not aware that the maturing and simplifying the means of telegraphic communication by this beautiful and mysterious agency, and for which they had the authority of our admirable (?) patent laws, has brought about their ears the hornets of the law, from whose attack, however, we are glad to find they have at present escaped, with scarcely a sting. The patentees had constructed a telegraph on this principle on the Northampton and Peterborough Railway; and an agent of the Electric Telegraph Company, formed for constructing telegraphs on Cooke and Wheatstone's plan, climbed a ladder, and through a window obtained a view of the working of the instrument. An injunction was applied for in the Vice-Chancellor's Court, and the motion opened on the 15th Dec. last, but postponed in consequence of the defendants having filed affidavits after the case came on; and on Wednesday last it was reheard. It appeared that the plaintiffs had, from time to time, obtained several patents for the electric telegraph, and improvements upon it, from 1837 to 1842, and had also purchased the interest of various persons who had made improvements on it; they obtained, in June last, an Act for incorporating a company. Nott's (the defendant's) patent was granted Jan. 20, 1846, and enrolled 20th July last. For the plaintiffs, Mr. Bethell and Mr. Heathfield attempted to show that defendant's invention was so nearly identical with plaintiffs', as to constitute a clear infringement. Mr. Stuart and Mr. Webster for the defendant, contended that the agency of electricity was no new discovery—that the invention was a very great improvement on the plaintiffs' instrument, which was worked by numerous wires; while defendants' could traverse any distance, and any number of stations, with one wire only. The plaintiffs' signals were made by a species of short hand, or signs, requiring much teaching to understand. The defendants' was made by four alphabets on a circular dial-plate—the letters being indicated by a hand, like the hand of a chronometer, moving *with a dead-beat escapement*, by pressing a key, resembling that of a pianoforte, and so simple, that any one could immediately



communicate. The Vice-Chancellor said that, in order to do justice, the court could not interfere until the matter had been tried in a court of law; there could be no difficulty in the plaintiffs making out what was the subject of their patents, and that court could not act so summarily. The opinions of Professors Faraday, Brande, and Bachhoffner, and Major Braudreth, had been given in favour of the defendants' invention; and how could the court decide under such circumstances? If the originality of the plaintiffs' title were shown, it was still a question whether it was good in law; and as he thought no damage could accrue in the meantime, he should order the motion to stand over, with liberty to plaintiffs to bring their actions in the usual way. We have always understood it to be the basis of our patent laws, that a "principle" could not be patented; and if the plaintiffs are only patentees for the *application* of the *principle* of electricity, Nott's application is no infringement, as being widely different.

Copper Mining Company.—In the Court of Review, on Thursday, Mr. Greene made application, on behalf of the Incorporated Company of Copper Miners, which had been constituted by letters patent, that the company might be at liberty to sue out a fiat against a party who was their debtor—their officer, duly authorised under the seal of the company, being allowed to prove the petitioning creditor's debt. The company, by their letters patent, were constituted a body corporate and politic in deed and by name, and was empowered to answer before any justice or justices, and to appoint officers for the purposes of the society. By the practice of the Bankruptcy Office, it was requisite that the petitioning creditor, and the party who was to make the necessary oath, should be one and the same person. The learned counsel referred to a case before the Lord Chancellor (Sir Anthony Hart) of Ireland, in which a corporate body had been allowed to petition and proceed for a fiat under the 5th Geo. II. The question in this case depended upon the 6th Geo. IV., c. 13.—The Chief Judge said he was of opinion that the application should be granted—due are being taken that the seal of the corporation was duly verified.

American Railroad Iron.—The first bar of railroad iron was made in 1844, and there are now 16 or 18 foundries at which it is made, and these make over 120,000 tons per annum. This amount is sufficient to lay four miles of railroad per day, or 1200 miles per year. The progress of this manufacture in the short space of two years, in this country, is very remarkable, and is a strong manifestation of American enterprise and skill.—*American Sun.*

INDUSTRY OF BELGIUM.

This country may be justly considered as the great mining kingdom of the continent of Europe—abounding, as it does, with extensive coal mines in the districts of Mons, Liege, and Charleroi, the department of Sambre and Meuse, Saumur, &c., giving employment to thousands of colliers—iron, copper, and lead mines, and numerous forges for making it proper for the different markets, particularly those of France—the fabrication of steel, machinery of every description, steam-engines, locomotives for railways, rails, and all other requisite materials. The hammer is constantly going, and the furnaces issuing forth their blast, night and day, so that one might imagine oneself in the regions of Vulcan. The produce of coal and iron is not the only riches with which the stratum of Belgium is blessed, for the use of mankind and the support of its population; but the valuable calamine mines, for the manufacture of zinc, adjacent to the coal-pits, are one of her principal resources, particularly those of the Vieille Montagne, Nouvelle Montagne, Grande Montagne, and Antonius Companies, which export annually to an immense amount—not only to France, England, the north of Europe, Spain, Portugal, and Italy in the south, but to India, China, Havana, Cuba, and the whole of the New World, or vast continents of North and South America, Brazils, &c. The province of Liege is, without doubt, that portion of Belgium which is the most prosperous, since mining industry has made so great a progress, in consequence of the peace of Europe, and her industrious population can now work fearlessly, without the dread of foreign invasion. Her high furnaces are in full blast in every direction—but particularly along the banks of the river Meuse, between Liege and Huy; the extensive forges of Seraing, Charleroi, &c., all give continual work to the poorer classes and their families; and, to the credit of the proprietors of mines and forgemasters, everything is done to alleviate their toil, by the erecting of comfortable cottages for them and their families, with a small garden to each, instructing their children, so as to obtain their own livelihood when sufficiently strong to endure fatigue; and one great philanthropic act of those who have wealth, is providing for the miner in his old age, or should he be incapacitated from illness, or accident, whilst in their service.

In 1845, the province of Liege only had 428,130 inhabitants; and, in 1846, the return was 434,417. There are 83 coal mines which have been conceded by Government, extending over a superficies of 220 acres, besides 31 others, which are provisionally authorised to be worked, extending over 7381 acres. Out of these 114 pits, 106 are in full work, employing, for extracting the coal, 67 steam-engines of the power of 1599 horses; 37 steam-engines of 4060 horses for draining the waters, and two engines only of 32-horse power for ventilating the mines. The number of colliers is estimated at 11,000, and the annual quantity of coal obtained about 1,100,000 tons—the profits on which averages 7½ per cent. Besides the coal, there are nine metallic mines, which produce 31,156 tons of calamine (zinc); 2587 tons of galena (lead); and 5467 tons of hydrated iron. The production of flattened zinc exceeded in 1846, 8000 tons, to obtain which it was necessary to reduce 32,000 tons of calamine, and consumed 53,000 tons of coal. Besides the Vieille Montagne Company, there are three other important ones in this province, which is the calamine or zinc factory of the world. Sheet copper and brass factories, and the making of pins, occupy a great number of hands; but that of fire-arms is one of the most considerable industries of that district after mining; and hundreds of mechanics are fully employed all the year round for exportation. Many of these muskets, pistols, and fowling pieces, are sent out to the Havana, the Brazils, Mexico, and South America; but the great sale is in Europe, as, during last year, it was 320,000*l.*; the number of fire-arms exported, 275,000—of which 85,000 were single barrel, and 26,000 doubled barrel guns; 17,000 common muskets; 20,000 horse pistols; and 78,000 small pocket pistols, which, although prohibited entering France, are passed annually by thousands. The average number of muskets made last year amounted from 40,000 to 45,000; some of these muskets are sold as low as 4s. 2d. to 5s. each; double barrel guns at 33s. 4d. to 37s. 6d.; and good sporting fowling pieces at 4*l.*, which are charged at Paris from 10*l.* to 12*l.* In the valley of Vesdre, the occupation of the poorer portion of the inhabitants is in the extracting of iron and burning of lime, which gives employment to numbers. Mining enterprise has never been so flourishing, as, throughout the last year, the colliers, forge, and ironmasters, and every branch of metallic industry, have been fully employed.

The high price of iron has, however, been a great drawback to the nail trade. It is well-known how much the iron and forgemasters of France dread the customs union with Belgium, as they fear that they could not compete with her iron factories. It may not be amiss to state, that in Belgium the manufacturers of cast metal, nails, boilers for steam-engines, and ironwares, are making a great outcry at the high import duty they are obliged to pay on foreign cast metal, so requisite in their business, and of which the high furnaces of Liege, Acquelines, Luxembourg, Charleroi, and other forge districts, cannot either produce a sufficient quantity or quality for the supply of their establishments. Several influential meetings of the members of the Chamber of Commerce (chiefly iron and forgemasters) of Liege, Charleroi, and other important cities, were held at the latter end of last year, when petitions were numerously signed, praying the Government to reduce the duty on English cast metal to 1s. 3d. per cwt., and on pig-iron to the former duty, before the extra rise of 1840. A committee has been formed, and the subject is now under the consideration of the Government, as a great modification of the Belgian tariff will be presented early this session to the Chambers for their approval—one of which, in particular, is, that in the importation of British cast metal and iron, as primitive materials requisite to the manufacturers of the country; and as the majority of the Deputies are favourable to it, there is little doubt of its passing into a law.

Explorations in Canada for Copper Mines.—The discovery of the vast deposits of copper ores on the American side of Lakes Huron and Superior, induced the Canadians to explore the strata on their side the lake; and the result has been the opening a new field of enterprise for the colonists, a stimulus in the settlement of its waste lands, and holding out good chance of emolument to Irish and other emigrants. In the early part of the present year, Mr. Logan, the provincial geologist, was dispatched to Lake Superior to make surveys and locations for holding of licenses, of which the principal is the Montreal and the Quebec Mining Companies. They will be permitted to work mines under their licenses, with the option at any time, within two years, to purchase the location of 10 square miles in which the mines are situated at 4s. per acre, payable one-fifth part in hand, and the balance in five yearly payments, with interest. Each license holder, whose location shall be designated by the provincial geologist, shall be entitled to a certificate of location from the commissioner of Crown lands, upon payment of 150*l.*, to cover the cost of survey and other expenses: this sum is to be placed to his credit, and forfeited to Government if his instalments are not paid in due time. Surveys have been made, and interim titles obtained to 18 locations, including harbour and mill sites, extensive woods of spruce, birch, cedar, firs, and pines. Ground has been cleared for gardens and brickfields, wharfs for boats and schooners, and 30 cabins, houses, and blacksmith's shops, have been erected, with the view of commencing operations in the spring. Specimens of the ores have been analised by Professor Silliman; they are principally grey sulphurets, yielding from 40 to 63 per cent. of copper. Specimens of native copper and silver of great beauty were also sent to the professor, who considers the ores will work in the large way from 30 to 50 per cent. produce; the copper is considerably impregnated with silver. A meeting of the Montreal Company was held in that city on the 16th November—Sir George Simpson in the chair—when the Hon. Mr. Moffatt said, that the trustees had resolved not to influence the price of shares—that they had no interest in their being higher in the market—and that, if the undertaking proved unsuccessful, the original promoters ought in justice to bear the loss.

It is not all that we are apt to spunk on rumour; but it is, we feel, imperative upon us to state what we hear, and allow those interested to ascertain the correctness of the information conveyed through the medium of our columns, by a reference to the offices of the respective companies. It has come to our knowledge, on the eve of going to press, that a run or accident has taken place in the Cuba Mines—but whether the Cobre or Santiago, the one or both, we cannot determine. If such be the case, however, it will, doubtless, be viewed with pleasure by the Cornish miner, although we can very well imagine the smelter will not be so well pleased, as it will tend to advance the price of ore, and reduce his exorbitant profits. We shall endeavour to ascertain the details, which time does not at this moment admit.

Exportation of the Precious Metals.—The following are the official returns of the exports of gold and silver from the port of London for the last week:—

Silver coin to Belgium ..... 42,000 ounces.

STEAM TO INDIA VIA EGYPT, MALTA, ITALY,
ALEXANDRIA, AND THE PENINSULAR PORTS.

PASSAGE TO BOMBAY, MADRAS, AND CALCUTTA.

The Peninsular and Oriental Steam Navigation Company BOOK PASSENGERS for CEYLON, MADRAS, and CALCUTTA direct, by steamers leaving Southampton on the 20th, and for Alexandria, *en route* to Bombay, on the 1st of every month.

A steamer from Southampton leaves the 1st and 20th of every month for Malta, where are steamers to Naples, Genoa, Civeta Vecchia, three times a month. 38

STEAM TO CORUNNA, OPORTO, VIGO, LISBON, CADIZ, AND GIBRALTAR.

A steamer leaves Southampton on the 7th, 17th, and 27th of every month.

Apply at the Peninsular and Oriental Steam Navigation Company's offices, 51, St. Mary Axe, London, where only passages can be secured throughout.

CALEDONIAN RAILWAY.—LOANS ON DEBENTURES.

—The Caledonian Railway Company are prepared to RECEIVE TENDERS for LOANS on DEBENTURES, in sums of not less than £500, for three or five years, bearing interest at 4½ per cent. per annum. The interest to be payable half-yearly, in Edinburgh, Glasgow, London, Liverpool, Manchester, or Bristol.—Tenders to be addressed to the secretary, Edinburgh. By order of the directors,

J. BUTLER WILLIAMS, Secretary.

Caledonian Railway Office, 122, Princes-street, Edinburgh, Dec. 21, 1846. 39

CAMERON'S COALBROOK STEAM COAL & SWANSEA
AND LOUGHOR RAILWAY COMPANY.

Registered and incorporated by 9 and 10 Victoria, cap. 401.

An EXTRAORDINARY GENERAL MEETING of the proprietors of this company will be HELD at their offices, 2, Moorgate-street, London, on Monday, the 18th day of January inst., at Twelve for One o'clock precisely, to declare a dividend for the half-year ending on the 31st December last. The same meeting will, therefore, be made SPECIAL, to receive the report of the directors with reference to the company's railway, pursuant to the provisions of the Acts of Parliament relative thereto.—The transfer books will be closed from the 4th until the 18th inst. inclusive, preparatory to the above-named dividend. 40

By order of the board of directors,

2, Moorgate-street, London, Jan. 2, 1847. A. C. HOWDEN, Secretary.

MANCHESTER, SHEFFIELD, AND LINCOLNSHIRE RAILWAY.
TENDERS FOR RAILWAY TRUCKS. 41

The directors will meet at their office, in Sheffield, on Wednesday, the 10th February, at Twelve o'clock, to RECEIVE TENDERS for the SUPPLY of RAILWAY TRUCKS.

Further particulars may be obtained at Mr. Fowler's offices, 13, Abingdon-street, Westminster.—Sheffield, Jan. 9, 1847.

MANCHESTER, SHEFFIELD, AND LINCOLNSHIRE RAILWAY—GREAT GRIMSBY AND SHEFFIELD JUNCTION RAILWAY.
TENDERS FOR SLEEPERS. 42

The directors will meet at their office, in Sheffield, on Wednesday, the 10th February, at Twelve o'clock, to RECEIVE TENDERS for the SUPPLY of RAILWAY SLEEPERS.

Further particulars may be obtained on application at Mr. Fowler's offices, 13, Abingdon-street, Westminster.—Sheffield, Jan. 8, 1847.

MANCHESTER, SHEFFIELD, AND LINCOLNSHIRE RAILWAY—SHEFFIELD AND LINCOLNSHIRE JUNCTION RAILWAY.
TENDERS FOR SLEEPERS. 43

The directors will meet at their office, in Sheffield, on Wednesday, the 10th February, at Twelve o'clock, to RECEIVE TENDERS for the SUPPLY of RAILWAY SLEEPERS.

Further particulars may be obtained on application at Mr. Fowler's offices, 13, Abingdon-street, Westminster.—Sheffield, Jan. 8, 1847.

NORTHERN COUNTIES UNION RAILWAY COMPANY.

—Notice is hereby given, that a SPECIAL GENERAL MEETING of the shareholders of this company will be HELD at the London Tavern, Bishopsgate-street, in the city of London, on Wednesday, the 20th day of January next, at One o'clock P.M., for the purpose of taking into consideration, and approving, or otherwise, the proposed application to Parliament for the partial deviation of the line, and the amendment of the Act constituting this company.—Also, in compliance with the requisition of the shareholders, for the further purpose of taking into consideration, and approving, or otherwise, certain propositions for an amalgamation of this company with the Liverpool, Manchester, and Newcastle-upon-Tyne Junction Railway Company.

Any shareholders who desire proxies, in order to vote at the said meeting, will have the same forwarded to them, on applying at the company's offices, and by payment of the 2s. 6d. each—the cost of the stamp. By order of the board,

CHARLES LOCOCK WEBB, Secretary.

Dated Company's Offices, 1, Poet's Corner, Westminster, Dec. 18, 1846. 44

WEST FLANDERS RAILWAYS COMPANY.—Notice is

hereby given, that INTEREST, at the rate of 3 per cent. per annum, on the paid-up capital in this undertaking, for the half-year ending the 31st day of December, 1846, will be PAYABLE at the offices of the company on or after Friday, the 1st of January, 1847. It is necessary that the certificates for shares, "To Bearer," should be left at the office three clear days; and, when called for, a warrant for the amount of interest will be given. WILLIAM JESSE, Secretary.

11, King William-street, Mansion-house, Dec. 23, 1846. 45

PATENT GALVANISED IRON AND WIRE ROPE WORKS,
MILLWALL, POPLAR.

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.—Mr. J. S. Tregellas, Truro, agent for Cornwall. 46

THE PROJECTED RAILWAYS.

PATENT METALLIC SAND OR ENGLISH POZZOLANO.

—The PROPRIETORS of the METALLIC SAND, after many years' experience of its merits, confidently RECOMMEND it to the attention of Engineers, Architects, Builders, and the public generally, as an invaluable article for HYDRAULIC and OTHER WORKS requiring great strength and durability.

In analysis, the metallic sand is very similar to the Italian Pozzolano—the value of which, in all subaqueous works, is so well known to engineers and architects; but from its granular form, and the sharpness of its angles, and the increased quantity of iron it contains, the metallic sand has been found more durable, and much cheaper than any other similar material at present in use.

From its chemical qualities it forms, in admixture with lime and common sand, a cement, mortar, or concrete, of flinty hardness, and almost entire incompressibility; and from its adhesive and impervious qualities, it completely and for ever excludes water. The more it is exposed to the atmosphere, and, to wet and damp, the harder and more durable it becomes. In the formation of mortar and concrete, it has been extensively used in the great tunnels on the London and Birmingham Railway, in the foundations of the New Houses of Parliament, sea walls on the North Devon Railway, Clifton Reservoirs, and other works of importance.

As an external stucco, the metallic sand cement is unaffected by frost or wet; in appearance it resembles the best Portland stone; requires, therefore, neither colour nor paint, and is entirely free from vegetative cracks and blisters, to which Roman cement is liable.

Further information will be given, and specimens shown, on application to Mr. C. K. Dyer, 4, New Broad-street; and at the Metallic Cement Wharf, King's Road (opposite Pratt-street), Camden New Town, London. 47

ANALYSIS OF THE PATENT METALLIC SAND.

Silica	49	Lime	6
Oxide of iron	32	Magnesia	2
Alumina	6	Zinc	3
Arsenic and carbonate of copper			2

PATENT IMPROVEMENTS IN CHRONOMETERS,
WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £9 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 48

DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

LAMHEROOE WHEAL MARIA MINING COMPANY.—

At a Meeting of adventurers, held, pursuant to notice, at the offices, 4, King-street, Cheapside, on Thursday, the 7th January inst.,

JOHN SUNLEY, Esq., in the chair. 49

The circular convening the meeting was read by the secretary.—The report of the committee, with the accounts for the past two months, including the October and November cost-sheets, were also read.

It was, thereupon, moved by Thomas Ruston, Esq., seconded, and carried unanimously,

That the report and accounts be received, adopted, and entered upon the minutes.

It was further resolved unanimously,

That the several members of the finance committee—viz., Messrs. J. Edwards, P. Darey, W. Morrison, H. Smith, T. Ruston, W. Pegg, J. Sunley, and K. Kingsford, jun.—who, by the rules, vacate their office, be re-elected, with the exception of one, who, having disqualified, Mr. John Addis be appointed in his stead; and that the thanks of the meeting be given them for their past services. JOHN SUNLEY, Chairman.

Moved by Wm. Morrison, Esq., seconded, and carried unanimously,

That the thanks of the adventurers be given to the chairman for his conduct in the chair.

4, King-street, Cheapside, Jan. 7, 1846. J. CROFTS, Secretary.

LEGAL AND GENERAL LIFE ASSURANCE SOCIETY,
No. 10, FLEET-STREET, LONDON.
ESTABLISHED 1836.

The ATTENTION OF THE PUBLIC, and particularly of persons contemplating assurance, is invited to the several NEW and IMPORTANT IMPROVEMENTS which have been now adopted by this society, at the termination of the first decennial period from its establishment. Among other advantages now, for the first time, offered by the directors of this society are these:—

1. Persons assuring their lives in this office may, without payment of any extra premium, reside in New South Wales, Cape of Good Hope, Canada, Northern States of North America, and in any place distant more than 33° from the Equator, and may also, without any extra charge, pass by sea between any two places in the same hemisphere distant more than 33° from the Equator.

2. The charging of low rates of extra premium for permission to go to the East Indies, the West Indies, or to any place distant less than 33° from the Equator. 37

3. The maintaining of the policy in force when the person whose life is assured goes out of the limits allowed, provided that the requisite additional premium be paid as soon as the fact of such departure becomes known to the parties interested in the policy.

4. Persons who have appeared before the examining medical officers of the society are not required to appear also before the board of directors. The amounts assured by policies will be paid in all cases of death by duelling or by the hands of justice. In case of suicide, when the person whose life is assured is also the party who is entitled to the benefits of the policy, the whole of the premiums received will be returned. Notices of assignment of policies will be acknowledged.

The advantages announced above are not restricted in their application to policies hereafter to be issued, but are extended to all policies now subsisting.

The persons assured by this society are entitled to receive four-fifths of the profits. The first division will take effect at the present time (31st Dec., 1846)—the result of such division will be very shortly declared. The future period of division will not exceed seven years. No admission or entrance fees are required.

Medical officers for the examination of lives proposed for assurance, are in attendance at the office every Tuesday and Friday at 2 o'clock.

December 31, 1846. By order of the board, T. R. EDMONDS, Actuary.

EUROPEAN LIFE INSURANCE & ANNUITY COMPANY.
ESTABLISHED JANUARY 1, 1819.

Empowered by special Act of Parliament, 7 and 8 Victoria, cap. xiviii.

OFFICES—No. 10, CHATHAM-PLACE, BLACKFRIARS, LONDON; and No. 53, DAME-STREET, DUBLIN. 52

JOHN ELLIOT DRINKWATER BETHUNE, Esq., Chairman.

Insurances may be effected daily on the ascending or descending scale—a limited number of annual payments, by even annual, half-yearly, or quarterly payments, or by payment of half the usual annual premium for five or seven years.

Parties effecting insurances on their lives for £500, or upwards, are privileged to attend and vote at the half-yearly general courts. CHARLES SAUNDERSON, Sec.

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY.
26, *CORNHILL, LONDON.*

Capital £500,000.—Empowered by Act of Parliament.

This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.

Assurances for terms of years are granted on the lowest possible rates. 53

DIVISION OF PROFITS.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 85 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Age	Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
60	£1000	£0 3 4	1837	£217 15 1	£109 0 11	£16 0 4	£445 0 0
			1838	192 3 0	87 1 4	13 10 2	395 11 1
			1839	165 11 10	74 1 9	11 3 1	346 2 3
			1840	116 7 6	54 0 10	7 18 10	296 13 4
			1841	111 6 8	49 10 0	7 10 4	247 4 5

The division of profits is annual, and the next will be made in December of the present year. F. FERGUSON CAMROUX, Secretary.

UNIVERSAL GAS BURNER—THIRTY TO FIFTY PER CENT. SAVED!—The PATENTEES beg to call public attention to the following facts.

The advantages resulting from the invention are various and striking. Independently of a saving of 30 to 50 per cent., the combustion is perfect, and the brilliancy produced superior to any light hitherto discovered. It emits neither smell nor smoke, and burns steadily for any period; and such is its purity, that it neither affects nor soils the most delicate colour or the finest fabric. Objections have been made to the introduction of gas in dwelling-houses, to the expense of fittings, to its destruction of furniture, draperies, gold moulding, &c.; these are entirely obviated by the PATENT UNIVERSAL GAS BURNER. As the cost of laying on gas is much lower than is commonly supposed, it is adapted for private dwellings, as well as for club-houses, hotels, manufactories, and public buildings. One of the small burners is amply sufficient to light a good-sized room, at a sum immeasurably lower than spirit, oil, or candle, with the avoidance of waste or trouble. 54

The merits of the "Burner," its brilliancy and economy surpassing every other known light, are shown by the annexed authentic opinions of the qualities of the UNIVERSAL GAS BURNER.

EXTRACT from the "Proceedings of the Institution of Civil Engineers," Tuesday, May 26 1846—Sir JOHN RENNIE, president, in the chair.

"A gas burner, of a novel and ingenious construction, was exhibited. The principal novelty was the introduction of a stream of air to the centre of the flame by a hollow button in the middle of the burner. The air passing up through the hollow stem of the button, was heated, and passed out by two series of fire-holes around the periphery, and impinging with force on the flame of the gas curved it outwards in the shape of a tulip, while the oxygen of the air, mingling with the carburetted hydrogen gas, produced a very perfect combustion. The *flame was quite white down to the top of the burner*—was very steady, as was amply demonstrated by the excellent light of the institution, where these burners have been used. In comparing the consumption of these burners with that of the concentric ring burners, and trying the power of the two lights by the photometer, the new burner gave a better light, with a saving of rather more than one-third.

CERTIFICATE.

POLYTECHNIC CHEMICAL SCHOOL.—"In testing Clark, McNeil, and Co's Universal Gas Burner with one of the best shadowless burners, *it gave a more pure and brilliant light*, with a saving of 20 to 25 per cent."

GEORGE CRISP, *Engineer*, ROBERT LONGBOTTOM, *Secretary*.

CERTIFICATE.

"In a series of experiments made upon Clark, McNeil, and Co.'s Patent Universal Gas Burner, its superiority was satisfactorily established in economy and the quality of the light; tested against argand burners, Nos. 4 (12 holes), and 6 (15 holes), it afforded a saving of at least 25 per cent., and against three fish-tails burners, No. 4, 40 per cent. *The colour and brilliancy of the flame is superior to any other burner.*"

T. W. KEATES, *Consulting Chemist*, J. D. PALMER, *Mechanical Inspector*.

The UNIVERSAL GAS BURNER is used nightly at the Polytechnic Institution, and may be had and seen from 11 till 4, at the patentees, 60, St. Martin's-lane Charing Cross, and of all gas fitters in London.

Copy of a Letter from "COLONEL HAWKER" (the well-known author on "GUNS AND SHOOTING")

Longparish House, near Whitchurch, Hants, Oct. 21, 1846.

SIR,—I cannot resist informing you of the extraordinary effect that I have experienced by taking only a few of your LOZENGES. I had a cough, for several weeks, that defied all that had been prescribed for me; and yet I got completely rid of it by taking about half a small box of your Lozenges, which I find are the only ones that relieve the cough without deranging the stomach or digestive organs.—I am, Sir, your humble servant,

To Mr. Keating, &c., 79, St. Paul's Churchyard. P. HAWKER.

KEATING'S COUGH LOZENGES are PATRONISED also by his Majesty the King of Prussia, his Majesty the King of Hanover, and most of the Nobility and Clergy of the United Kingdom, and are especially recommended by the Faculty.

RECENT TESTIMONIAL.

DEAR SIR,—Having been, for a considerable time during the winter, afflicted with a violent cough, particularly at lying down in bed, which continued for several hours incessantly, and after trying many medicines without the slightest effect, I was induced to try your Lozenges; and, by taking about half a box of them, in less than 24 hours, the cough entirely left me, and I have been perfectly free from it ever since.

9, Claremont-terrace, Pentonville, I am, dear Sir, yours, very respectfully,
Feb. 17, 1845. JAMES ELLIS.

Mr. KEATING. (Late proprietor of the Chapter Coffee-house, St Paul's.)

Prepared and sold in boxes, 1s. 1½d., and tins, 2s. 9d., 4s. 6d., and 10s. 6d. each, by T. Keating, chemist, &c., No. 79, St. Paul's Churchyard, London; and retail by all druggists and patent medicine venders in the kingdom. 55

N.B.—To prevent spurious imitations please to observe that the words "KEATING'S COUGH LOZENGES" are engraven on the Government stamp of each box.

NOTICE.—These Lozenges contain no opium, or any preparation of that drug.

IMPORTANT TO RAILWAY COMPANIES.

PATENT KAMPTULICON COMPANY, 18, CORNHILL.

This company having completed their new factory, are prepared to supply railway managers and contractors with an elastic material (perfectly non-absorbent) to place between the rails and sleepers, and between the frames and bodies of carriages, to prevent jarring, and, consequently, wear and tear. The elastic planking is strongly recommended to be used for the backs and sides of carriages, to prevent splinters when accidents occur. 56

By order of the board, P. G. GREVILLE, Secretary.

IMPORTANT TO ENGINEERS, MANUFACTURERS,
RAILWAY AND STEAM-BOAT COMPANIES.

Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their IMPROVED PATENT ELASTIC METALLIC PISTONS. 57

The PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is—

1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.

2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.

3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water way.

Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.

Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

TO ENGINEERS AND BOILER-MAKERS. 58

LAP-WELDED IRON TUBES FOR STEAM-BOILERS.
THE BIRMINGHAM PATENT IRON TUBE COMPANY,

42, *CAMBRIDGE-STREET, BIRMINGHAM, & SMETHWICK, STAFFORDSHIRE*, MANUFACTURE TUBES under an exclusive license from Mr. Richard Prosser, the patentee. These tubes are now very extensively used in the boilers of marine and locomotive steam-engines in England and on the continent—are stronger, lighter, cheaper, and more durable than brass or copper tubes, and warranted not to open in the weld. They may be fixed in the boilers without ferules, and can be taken out and refixed without additional trouble or expense.—Address, 42, Cambridge-street, Crescent, Birmingham.

LONDON WAREHOUSE,
68, *UPPER THAMES-STREET.*

TO ENGINEERS, BOILER-MAKERS, AND OTHERS.—
LAP-WELDED IRON TUBES, FOR STEAM-BOILERS.

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